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Desiring to make a practical, useful journal for the General Practitioner,  
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## Original Articles

### THE INTER-RELATIONS OF DIABETES AND OTHER CONSTITUTIONAL STATES.\*

BY GEO. F. BUTLER, M.D.,

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The great error dominating conceptions of disease in their clinical and therapeutic aspects is that which fixes upon one symptom as a test of disease rather than the symptom complex. Perhaps in no disorder is this better illustrated than in diabetes. The predominant symptom of diabetes is glycosuria. This condition may not only be an expression of many diseases, but may be at times merely the result of excess in carbo-hydrates. Glycosuria occurs in all the neuroses, not as a complication, but as an expression of metabolic instability, resultant on nerve disturbance. The vaso-motor nerves of the liver have their origin in the floor of the fourth ventricle, and pass through the cervical and upper dorsal regions of the spinal cord, the rami communicating opposite the fourth or fifth dorsal vertebræ to join the sympathetic and enter the liver as the hepatic plexus. Injury to the fibres at their origin in the fourth ventricle, in any part of the spinal cord, or of the sympathetic itself, is followed by glycosuria. Conditions such as express themselves in glycosuria and allied sub-oxidations readily occur in the neuroses. Hysteria may be

\* Read at Canadian Medical Association, London, Ont., August 26th, 1903.

complicated, for instance, with glycosuria of transitory or prolonged duration, which may eventuate in coma of an apparently diabetic type, but which disappears with the disappearance of the most marked hysterical symptoms. The great neuroses, paretic dementia, locomotor ataxia and epilepsy, occasionally display temporary glycosuria.

Delirium tremens and the confusional insanities may at times have a temporary glycosuria. Every one of the febrile conditions may be glycosuric. Conditions in which respiration is involved are often accompanied by glycosuria. Pregnancy being a condition in which there is over nutrition, faulty elimination and resultant imperfect oxidation is often attended by glycosuria. The patient may be glycosuric only during pregnancies. Glycosuria may come on during pregnancy, and be present during the period only, or it may occur immediately after pregnancy is terminated, and may recur sometime after, and may remain for a long time after pregnancy, and then suddenly disappear.

Gout and insanity of the auto-toxic types frequently alternate with glycosuria. During the mental disease, or during the gout glycosuria is absent, and its reappearance is an indication of recovery, while its disappearance is the precursor of an attack. What is true of glycosuria is likewise true of the states allied to it, acetonuria, etc. Every one of the acids from sugar metamorphoses may be formed in the urine of depressed mental states and after the apoplectiform and epileptiform attacks of paretic dementia, the crises of locomotor ataxia and the status epilepticus.

Independently of the symptom complex diabetes, there are states of which glycosuria is a symptom consequent on suboxidation, which they produce, that are temporary in character and have not the permanency characteristic of the disease diabetes. Many neuroses, however, are an expression of the suboxidation states constituting diabetes. In all of these glycosuria may disappear just previous to cerebral complications. The disappearance of glycosuria very often is an expression of imperfect elimination through renal insufficiency rather than a disappearance of sugar from the system. In a diabetic in a severe state of hyperglycemia sugar may be absent from the urine, yet the patient may pass into acidosis with resultant coma. Neurotic manifestations of diabetes comprise lesions of motility, of general and special sensibility of the intelligence and of trophic functions. Among the most marked motor manifestations are fatigue, lassitude, and deprivation of muscular energy which does not depend upon muscular weakness pure and simple, but may strongly sug-

gest a medulla affection. It is not always well marked. It may suddenly disappear to return as suddenly, and may first occur in consequence of a slight traumatism. Apoplexy with complete coma may occur, followed by hemaplegia, recovery from which may be rapid and complete.

Sometimes there is sudden loss of consciousness, which disappears so rapidly without resulting paralysis as to suggest epileptic states. Vertigo sometimes occurs alone, and sometimes precedes paralysis. Paralytic symptoms occur without loss of consciousness. Hemiplegia may be attended by very bizarre phenomena. In one case a left hemiplegia was accompanied by a monoplegia of the right eyelids. Monoplegias are very frequent in diabetes, and are apt to be extremely transitory. Paralysis of the right arm and face, ptosis, pupil dilatation, strabismus, and hesitancy in speech may follow glycosuria. While speech disorders are generally due to buccal dryness, yet true aphasia occurs, and aphonia from laryngeal paralysis is far from exceptional.

Imperfect muscular co-ordination in the dark attended by formication in the extremities may lead to a suspicion of locomotor ataxia. Cramps of the akinesia algera type frequently attack the lower extremities, especially at night and play an important part in the production of insomnia, being often the first indication of cerebral circulatory disturbance, and may be precursors of serious complications. Convulsions may be associated with coma, or may accompany paralytic phenomena. At times they present the monoplegic epileptic character and alternate with transitory paralysis of the same side.

Diabetic vertigo often assumes an epileptoid character. Asthma, exophthalmic goitre, and other respiratory neuroses are not infrequently temporary expressions of diabetes. Underneath them, and many diabetic neurotic states, lies the "air hunger" of the tissues, which is simply their expression of the need of oxygenation.

Diabetic absorption of oxygen as Voit, Peltenkoffer and others have shown, is much less than the normal, and decreases until toward the end of the disease, when it is hardly half the normal quantity. Carbon dioxide exhaled is proportionally reduced. This oxygen decrease Sajous ascribes, with much plausibility, to suprarenal disorder. Increased suprarenal activity, as Croftan has shown, can so augment the ferment producing power of the pancreas as to greatly increase sugar elimination through increase of the amylolytic ferment supplied by the pancreas which converts the liver glycogen into dextrose.

Herein lies the explanation of neuropathic glycosuria and of

diabetic neuropathies. In the first, the cause is primarily in the cerebro-spinal system. In the second the hepato-pancreatic-splenic and renal system is first affected, and the resulting toxic products, because of disordered oxidation, cause the nervous symptoms. The most furibund symptom of diabetes is coma. Under this title are included many conditions varying from mental depression, through apathy, to stuporous states with or without absorption in agonizing dreams or delusions. One of the most distressing conditions of partial stupor is that attended by psychic nausea where the nausea conception is intense but unattended by gastric disorder. Cases of this type often occur just after seeming coma, the patient refusing treatment because he believes his stomach is too squeamish to retain medicine. As the mental state is attended with loss of determining will power, like most depressional, stuporous or apathetic conditions, this psychic nausea and its effects are readily overcome by large doses of a saturated solution of sodium bicarbonate. Tablets should not be given, as they irritate the throat, thereby increasing the strength of the psychic nausea.

Nearly all the mental features of coma and its allies just mentioned, centre, like all depressional mental states attended by acidosis, around the medulla oblongata.

This is the origin of the cardiac, pulmonary and gastric instabilities which occasion such alarming features in the comatose and apathetic conditions of diabetes. The starting point of these disorders is central not local. The cerebral centres of the lungs, heart and stomach being disturbed, local excito-motor ganglia have undue play and become exhausted. Resultant local disorders underlie the diabetic endocarditis, diabetic myocarditis, diabetic phthisis, diabetic gastritis, etc. Diabetic skin, and diabetic tissues are, moreover, predisposed to microbic attack.

The etiologic moment of coma, comatose and stuporous states consists first of the condition of the patient at the time of the attack, and depends largely upon the condition of emunctories. The kidneys may be in good shape themselves, yet because the intestines are acting imperfectly with fecal resorption, the kidneys are overworked, which is shown by the presence of an excess of indican and urea in the urine. Secondary to this occurs renal insufficiency with resultant acidosis from retention of imperfectly oxidized sugar products.

Given the muscular changes which produce B—hydroxybutyric acid, acidosis production with decreased elimination is intensified. The skin in diabetics is very deficient in eliminative power which adds to the work of the kidneys. The lungs cannot

quite supply the oxygen ordinarily needed, not to speak of the increased amount required for diabetes, much less can they oxidize products unphysiologically eliminated through them. The lack of oxygen increases depression and apathy, which in turn decreases cardiac and lung energy. The liver has its nerve energy lessened, yet has increased poison destroying work thrown upon it. The diabetic, when elimination is lessened, is in a very serious and unstable condition, which the slightest shock will jar into coma, a comatose state, an epileptiform or apoplectiform convolution. The premonition of these is generally given by lessening polyuria, suppression of urine, or by the finding first of cylindroid, then, hyaline or granular casts. Albuminuria *per se* often means merely the urethral or prostatic irritations of diabetes. These, as predisposing to microbic attack, are of serious augury, but not as to coma, etc. The sudden disappearance of sugar or sugar acids with increased casts is ominous of renal insufficiency and resultant toxemic cerebral states.

Another part of the etiologic moment is the condition of the arteries, whether due to diabetes, age, lies, rheumatism, gout, the exanthemata or mental or school overstrain.

Apoplectic extravasations during the coma, epileptiform, or apoplectiform states may here lead to permanent, mental or nervous disorders.

Hereditary defect may show itself in the etiologic moment peculiarly at the periods of stress: 2 to 6, 12 to 14, 14 to 25, 45 to 55, and from 60 on, when the system is undergoing evolution or involution.

There are many eye, ear, nose, throat, gums, skin, and genito-urinary phenomena found in diabetes which bear one of these relationships to the disease. They are an outcome of diabetes and are modified by it, or modify it, and finally they may be mere coincidences.

The common erroneous assumption that morbid states occurring during a diathetic state are due to it, is peculiarly accepted as to diabetes. While there is more truth than usual in the assumption as regards diabetes, still treatment of these local conditions will often do as much to relieve diabetes as treatment of diabetes does to relieve them.

The so-called "reflex" disorders exert their influence on the general constitution through continuous nerve irritation producing nerve waste and resultant autotoxemias, which, as has been shown, are a peculiarly dangerous addition to the general burden of the diabetic. Treatment of all these conditions is required not only from the local standpoint, but likewise from the constitu-

tional. This is especially true of the eye, ear, skin, gums, and genito-urinary system, whose disorders are certain to add to the atmosphere of worry, resultant nerve waste, and consequent toxic strain on the emunctories into which the diabetic is plunged.

Clinical study demonstrates beyond doubt that most cases of diabetes are at first expressions of nutritional and assimilational instability. In consequence of the over-strain on the liver, adrenals, pancreas, spleen and kidneys, what were at first merely biochemical changes in these organs become permanent pathologic lesions, continuing constantly in excessive sugar manufacture without proper oxidation or elimination.

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## PROSTATECTOMY AND GALVANO-CAUSTIC PROSTATOTOMY (BOTTINI'S OPERATION); THEIR PRESENT STATUS IN THE RADICAL TREATMENT OF HYPERSTROPHIED PROSTATE GLAND.\*

---

BY WILLY MEYER, M.D., NEW YORK.

Professor of Surgery at the New York Post-Graduate Medical School and Hospital; Attending Surgeon to the German and New York Skin and Cancer Hospitals; Consulting Surgeon to the New York Infirmary.

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*Mr. President and Gentlemen,—*The question of the proper selection of operation for the relief of patients suffering from an enlarged prostate gland and its sequelæ has lost nothing of its importance and interest so far. Castration, including vasectomy, prostatectomy and galvano-caustic prostatotomy (Bottini's operation) are still in the field. The comparative value of these various procedures can be properly determined only by the final results, and that best by the results obtained by a single man in a fair series of cases. Hence, extensive personal experience, unbiased observation, and careful tracing of late results by objective examination, whenever possible, are the factors that will enable us to form a correct estimate as to the relative value of the operations in question.

Castration, although it has completely and permanently restored many a prostatic's urinary affection, will not be dis-

\*Read before the Section on Genito-Urinary Surgery of the New York Academy of Medicine, May 21st, 1903.

cussed here. It still has staunch advocates among men whose views surely command respect. However, since we have two methods to help such patients by attacking the gland directly, indirect influencing should be relegated to the rear, or at least should be our very last resort, especially as it deprives the patient of his virile power. Personally, I believe that a direct attack should first be made in the case of every patient who asks for relief. Failing in this, an operation on the testicles or the vas deferens may then be resorted to. In accordance with this view of mine, I shall, therefore, here consider prostatectomy and galvano-caustic prostatotomy (Bottini's operation) alone.

That prostatectomy is the most radical, as well as the most surgical procedure from an operative point of view, goes without saying. The operation is typical. It aims to remove the hypertrophied tissue within the prostatic capsule. If this be accomplished, proper urinary drainage ought to become re-established. Recurrence of the former trouble would seem more than unlikely. Galvano-caustic prostatotomy (Bottini's operation), on the other hand, does not attack the bulk of the gland; it only cuts grooves through the mass, leaving the gland itself in place. However, it may be stated parenthetically, that it is not the bulk of the gland that is the disturbing factor in the trouble under consideration. Bottini's operation, in contra-distinction to prostatectomy, is by no means a typical operation. The number, length and direction of the cuts must differ with every case. Numerous other questions, too, as, for instance, Shall we hook and compress the prostate while ploughing through the same? Shall we repeat the incision, whole or in part, by going over the ground twice? Shall we use blades of various size and length? How had we best proceed in the presence of a median lobe? etc., are still mooted ones. To do Bottini's operation properly, as required in the individual case, is, therefore, often a very difficult task. To determine the various points at issue, it is necessary to make a careful examination of the patient with regard to size, configuration and consistency of the gland. For this a thorough cystoscopic examination is essential. Every single case has to be studied as to its requirements. If this be done, and if all the details of the operation be carried out properly, the result in trained hands is often surprisingly good.

In order to personally test the merits and demerits of gal-

vano-caustic prostatotomy, I made it a point for five years, from October, 1897, to October, 1902, to practise Bottini's operation to the exclusion of all other methods. No selection of cases was made. Regardless of statistics, the operation was done in every case of prostatic hypertrophy that came under my care.\* Age, debilitated condition, and complicating renal affection were not considered contra-indications. In not a single instance was the operation refused so long as the patient asked for it. In everyone of the cases the after-treatment was carried out by myself personally; points of importance in the further history were carefully noted. It stands to reason that by thus making no discrimination whatever, Bottini's operation was, in some instances, performed upon patients, who, according to my present views, would have derived greater benefit from prostatectomy. The death-rate, too, was naturally swelled by my not refusing the operation to men whose far advanced bilateral, complicating renal affection should have deterred me to abstain from any attempt at still bringing relief.

Since October, 1902, I have individualized and done perineal prostatectomy in 6 and Bottini's operation in 4 patients.

I commenced this work a pioneer in the true sense of the word, having no other guide in the beginning than Bottini's original writings and Freudenberg's first brief, though excellent, article, published in the *Berl. Klin. Wochenschrift*, in April, 1897. The instrument and batteries used by me at that time, too, were inferior to those now employed. The decrease in the death-rate of the consecutive series (of 12 each) of my cases, nicely illustrates the gradual improvement in the necessary paraphernalia, as well as technique and personal dexterity.

Within the five years mentioned, 50 patients were operated upon by me with Bottini's operation, their age ranging from 47 to 80 years. In 48 of these the operation was done once, in 10 twice, and in one three times: 52 recovered and 7 died, death occurring as a direct consequence of operation in 3: (1) acute sepsis; (2) perforation of bladder by anterior cut, which has since been abandoned; (3) embolic (?) pneumonia. As an indirect result of operation in 2 cases: (1) Suprapubic cystotomy, eight days after the operation; (2) phlebitis of the left saphenous vein, eleven days after operation.

\*The only exception I made was in a man with a suppurating enlarged gland; here, extirpation, of course, by the perineal route was performed.

In order not to appear biased, I shall count the first of these two latter cases among the deaths directly due to the operation. The remaining two of the seven fatal cases died from the immediate effects of spinal anesthesia with the sterilized solution of tropacocaine.

Dividing my cases into series of twelve cases each, and comparing the death rates of the different series in an ascending scale, we have:

	Deaths already due to operation.	Deaths subsequently due to operation.
In the first 12 .....	2	1
" second "	1	1
" third "	1	1
" fourth "	1	1
" fifth (11 only so far)....	1	1

Of the 52 patients who recovered from the operation, 34 are alive to-day; 3 could not be traced; 3 died within six to ten weeks after operation of pyelonephritis that had existed long before operation, and 12 died from various causes, as apoplexy, cancer, general debility, nephritis, etc., from nine months to three years after operation.

Of these 52 cases 13 had complete retention, 33 had incomplete retention, and 6 had a persistent suprapubic fistula. Of the 33 patients with incomplete retention, 14 used the catheter from one to six times a day; 1 wore a urinal. Thus there were 27 patients who used the catheter, viz., 13 with complete and 14 with incomplete retention. Of these, 18 got rid of the catheter permanently; 2 used it, mostly for convenience sake, once at night; 3 were still obliged to use it; of 4 the later condition could not be ascertained.

Of the 6 patients with persistent suprapubic fistula, 2 have remained permanently cured, with the fistula closed to date; in 2 the fistula closed temporarily; 1 died ten weeks after operation with a contracting fistula; 1, in whom the suprapubic fistula had persisted for ten years, was so much improved by the operation that, a year later, he complained about his inability to introduce a No. 8 French silver catheter through the fistula for the sake of irrigation, as he had been in the habit of doing for so many years.

In 9 of the 52 cases with hypertrophy of the prostate, I found the trouble associated with stone (*Annals of Surgery*, July, 1902).

\*In the fourth 12 cases were two deaths due to spinal anesthesia.

In 5 of the 52 cases the membranous urethra was accidentally injured, causing perineal abscess in 4 cases, chronic inflammatory edema of scrotum and penis in 1. These patients in every single instance had a very soft gland, and the prostate had always been well hugged by the beak of the incisor, as originally advised by Freudenberg and described in my last article. Furthermore, I did not at that time use an incisor with centimetre division on the shank. This scale on the shank (recent proposition of Freudenberg) I consider a very important point indeed. I now no longer compress the gland and the accident here described has not occurred again, although I have done the operation twenty-six times since. I merely hug the gland, pull gently, without compressing it. I would mention, however, that all the cases in whom the accident happened recovered.

In one patient the rectum was injured and a recto-urethral fistula established. The accident happened in a much reduced man, 71 years old, who had a small, soft prostate and far advanced suppurating bilateral pyelonephritis. In his case (the only time in the 50 operations done) for special reasons, the street current, without amperemetre, was used.

Marked uni- or bilateral epididymitis, as a direct sequel to Bottini's operation, was seen in 6 patients: suppurating process of the testicle, necessitating incision, in 2; suppurating process of the testicles, necessitating castration in 1; a unilateral suppurating process of the vas deferens after vasectomy in 1.

In 20 of the 52 cases that recovered, the stream is noted as good at time of first examination; in 14 as fair; in 2 as weak; 32 had no pain in urinating; 5 some; 1 much. This became changed in a few instances at later examinations. As regards weight, this was noted in 38 of the surviving cases, and in every instance there was gain, sometimes considerable.

The results obtained in the first 24 cases operated upon by me were tabulated and reported at length in my last paper on Bottini's operation, published in the *Medical Record*, May 5th, 1900. It will be of interest to compare the results found at that time —two and one-half years after I first did Bottini's operation—with those noted in March-April, 1903, in the same series of cases.

Summarizing, we arrive at the following: Of 5 patients reported as cured in April, 1900, alive and heard from or re-examined in 1903, 3 have remained cured, 1 has to be classed as

much improved now, and 1 as not benefited. Of 3 patients reported as much improved in 1900, alive, etc., 1903, 1 remains much improved, 1 has to be classed as "improved" only, and 1 has recurrent residual urine. One patient reported as improved in 1900, on final examination in 1903, has to be classed as benefited to some extent only.

An analysis of the results of the 34 patients, who are alive to-day (including the 9 of the first 24 cases that were traced as still alive to date) either examined or heard from in March and April, 1903, shows the following: 10 are cured and 18 improved; in 1 the symptoms recurred to some extent, and 5 have to be classed as not improved. Of the 10 cases cured to-day, 3 had complete retention, 7 had incomplete retention, 3 of the latter using a catheter. Of the 18 improved, 6 had complete retention, 12 had incomplete retention, 3 using a catheter.

This gives 15 patients who had to catheterize themselves. Of these 10, that is, 66 per cent., laid the catheter permanently aside after Bottini's operation; 2 of the 5 could, if necessary, get along without its aid. They introduce it once or twice a day, in order to have a longer interval of comfort, particularly a better night's rest; 3 are still in need of it.

Little or no attention has so far been paid by authors to the question as to whether Bottini's operation or prostatectomy interfere with the power of intercourse. It is true this question is purely a social one, yet it may be of quite some importance if the patient has a wife living, and he be still below 60 to 65 years, sometimes even if he be older.

Inquiry of the 34 patients still living regarding this point brought out the following facts: The cases of 2 of my patients cannot be utilized in this connection, inasmuch as prostatectomy was performed by other surgeons sometime after Bottini's operation had been done by me: present condition with regard to this point not known in 3 cases. One patient, 73 years old, has no inclination for last 15 years; another, 80 years old, sick for years with paralysis agitans; a third patient, a diabetic, had absolute lack of erection for last nine years: 3 others, two 65 years and one 71 years of age, have been impotent for last three years or longer.

Deducting these 11 cases, we have 23 patients whose cases can be used with reference to the question at issue. Of these, power of intercourse was preserved in 20, viz., in 7 of the 11

cured cases; in 12 of the 18 improved cases; in 1 where the urinary trouble returned in part. However, in 1 (52 years) there is no orgasm; in 1 there is no seminal discharge in spite of orgasm; in 1 intercourse is not interfered with after Bottini's operation, though both *vasa deferentia* were dissected 5 years ago; of course, ejaculation is missing.

The power of intercourse was more or less interfered with in 3 patients, viz., a man, 49 years old, is impotent since operation: he has emissions, though erection is absent. Another, 62 years old, had weak erection before operation; is worse since operation. A third, 71 years old, claims to have lost power of intercourse since operation. Thus Bottini's operation has produced impotence in 2 out of 23 cases, and increased a weakness existing prior to operation in one. In two other patients irregularities in the normal seminal discharge have appeared.

This question as to the power of intercourse should also be carefully noted when tabulating the late results of prostatectomy, a point which, as stated before, has thus far received but little attention. Loss of sexual power has certainly quite frequently been met with after enucleation of the gland, as it has been carried out by most surgeons so far.

#### CONCLUSIONS.

1. The operations making a direct attack upon the enlarged prostate gland are preferable to those aiming to exert an indirect influence.
2. We have two useful operative procedures for the direct treatment of the enlarged prostate, *i.e.*, prostatectomy and galvano-caustic prostatotomy (Bottini's operation).
3. In selecting the method indicated in the given case we must individualize and be guided by anatomic, pathologic and social conditions.
4. Perineal prostatectomy offers advantages over the suprapubic method, since it enables the operator to do the operation under the direct guidance of his eyes.
5. Prostatectomy is, of course, the most radical and most surgical procedure; it should be the operation of choice whenever promising success.
6. Debilitated patients, who seem unfit subjects for the more radical operation, should not be relegated to catheter life, nor should prostatectomy be performed in order "to let them down easy"; they should be advised to have Bottini's operation done.

7. Surgeons should familiarize themselves with both methods in order to be in a position to do justice to their patients.

8. It is the duty of those refusing to do Bottini's operation under any circumstances, to nevertheless advise patients who ask for more radical relief to have Bottini's operation done, if the operation with the knife seems contra-indicated.

9. Further carefully compiled statistics as to the late results of both operative procedures—preferably in the hands of one man—are desirable in that they will increase our knowledge with reference to the selection of the proper method in the individual case.

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### PRACTICAL CONSIDERATIONS ON INTESTINAL ANASTOMOSIS.\*

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BY THEODORE A. McGRAW, M.D., DETROIT, MICHIGAN.

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In the practice of surgery, the field of intestinal anastomosis is becoming daily enlarged, and the questions connected with it more and more important. These questions are necessarily viewed by the general practitioner and the surgeon from very different standpoints, and the physician whose ultra-conservatism is regarded by the operator with disfavor is inclined on his part to consider the surgeon too impatient and reckless. It is in such general assemblies as this that all such matters may be discussed with advantage, and we may all hope by a frank interchange of views to arrive at rational conclusions as regards practice.

In this paper I seek to give, as impartially as I may be able, the principles which should govern the surgeon in his work in this particular field. There are four classes of cases which may make intestinal anastomosis necessary. They are, 1st, the various kinds of intestinal obstruction; 2nd, inflammations and ulcerations in the alimentary tract; 3rd, displacements of the viscera, and 4th, intestinal fistulæ. The first class is by far the largest in numbers, and the most important.

We may divide the intestinal obstructions into those which

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\* Read at Canadian Medical Association, London, Ont., August 26th, 1903.

are acute and those which are chronic. Of the acute obstructions I shall have little to say in this connection—the most of them, when operated on in an early stage, can be relieved by simpler operative methods. The intussusceptions may be drawn apart, the volvulus untwisted, the binding cord cut, and the hernias reduced.

The question of anastomosis comes in for consideration only when the gut has become gangrenous. In such cases the surgeon has a choice of a variety of procedures, none of which is very promising. He may immediately cut off the mortified coil and make either an end to end or lateral junction of the severed ends. This operation on the nearly moribund patient is only occasionally successful. It is difficult to determine the extent of bowel which must be sacrificed, and the surgeon is obliged either to excise a long piece of the gut or to operate on a tissue that is inflamed, soft and uncertain. Sutures are apt to cut through such tissues and permit an extravasation of feces. Many surgeons prefer to fasten the diseased coil in the abdominal wound and leave it to nature in hope that the patient may recover sufficiently to permit a secondary operation for the resulting false anus.

I venture to suggest a combination of these methods, which I have tried in one fatal case, and which seems to me to offer the best hope for the patient. In my procedure the surgeon draws the gangrenous coil out of the abdomen far enough to permit him to unite the two limbs of the bowel at a point where they seem healthy, by means of a rubber ligature. This requires very little time and causes no shock. All of that part which is liable to slough is then fastened outside of the abdomen, and the wound closed around it. The immediate result is a false anus through which the intestine may relieve itself of its contents, and when we consider the character of those contents we may hardly doubt that it is better that they should be discharged by the shortest and quickest route. At the end of two or three days a new channel has been cut by the rubber ligature and the false anus becomes unnecessary. It may then in time close spontaneously, or be closed by the simple operation of inverting and suturing the ends. In this way we may escape both the great danger of an immediate excision with an end to end anastomosis, and the severe secondary operation for the cure of an active false anus. The closure of the fistula when a free communication exists between the two segments of bowel above it would hardly require the opening of the abdominal cavity. Most physicians recognize the necessity of surgical procedures in cases of acute obstruction, although they are often too slow in arriving at a positive

diagnosis. This is, unfortunately, not the case with those chronic forms of obstruction which furnish the largest quota of cases which require the formation of intestinal anastomoses. I do not know why it is that the general practitioner evinces so much repugnance to operations on the very class of cases in which operations give the most brilliant results.

Cases of obstruction of a chronic nature differ from the acute obstructions, inasmuch as they are, during a comparatively long period, partial in character. Their symptoms develop gradually, and they give to the competent observer long notice of the coming closure. For this reason, the physician is enabled to study the conditions and to prepare, if he only will, for the coming disaster. To the surgeon, who is permitted to operate before the case has become desperate, a field is presented for operation which is free from inflammation, sepsis or gangrene. Stenoses of this character are most commonly caused by tumors or cicatrical contractions. The symptoms vary according to the seat of the obstruction and have to be studied, therefore, with especial relation to their location. When diagnosticating any given case we have to note the intensity and character of the pain or distress produced by the disease, the changes which take place in the form, size and feel of the abdomen, the location of any abdominal swelling, the degree of tolerance with which contents are allowed to accumulate before serious symptoms supervene, and the character of the vomit when it occurs. The movements of the viscera, seen as they affect the abdominal wall, and the gurgle of the fluids as they pass the point of stenosis will also in some cases afford positive evidence as to the seat of the disorder.

We may become best acquainted with the import of symptoms if we study them in turn as they appear in the obstructions of the separate portions of the alimentary canal from the stomach down. A pyloric obstruction will often end in death before the channel is obliterated. It is not at all uncommon to find on post-mortem that death has taken place from a pyloric tumor, in which the pyloric orifice is still large enough to admit the finger, or even the thumb, the patient having died, nevertheless, from inanition, due to the inability of the viscous to force its contents into the duodenum. The explanation of this fact is simple. Under normal conditions, the chyme is forced out of the stomach by rhythmical contractions of its muscular fibres, associated and in unison with a relaxation of the circular fibres which close the pylorus.

It is, in fact, a very complicated process, involving many nerves and muscles, by which small portions of the digested food

are forced intermittently into the duodenum. When the duodenum is filled, the further evacuation of the stomach is inhibited. Now, any malady which interferes with this delicate mechanism may prevent the passage of chyme and cause vomiting. A pyloric tumor or cicatrix may do so by preventing the rhythmical expansion of the pyloric fibres, or by causing a change in the direction of the vermicular motion, or by thrusting a mechanical obstacle before the coming bolus, which will divert its course. So, too, the adhesions around such a diseased segment will prevent the free motion of the gut, or even cause a positive obstruction by producing a bend in the bowel.

Now, the first symptom produced by a beginning pyloric obstruction is one of irritation. The patient complains of indigestion, and has eructations of gas; these symptoms increase in intensity as the disease progresses, and sooner or later he begins to vomit. The stomach, unable to dispose of its contents, becomes distended and prolapsed. The pain becomes more intense, and the vomit, which has at first consisted only of ingesta mixed with the normal secretions, begins to contain mucus and blood, and the products of fermentative changes. It must be noted that bile is always absent from these ejecta. The distension of the stomach usually causes a swelling to the left of the median line, but occasionally the stomach will be so enlarged as to pass completely across the abdominal cavity. The position of the stomach will be influenced also by adhesions which it may form with the surrounding viscera. A tumor, if such exists, may or may not be felt by palpation. It may lie under the liver and be hidden by that organ or by very rigid and tense abdominal muscles.

I wish to insist upon the fact that there are very few diseases, other than obstruction of the pylorus or first part of the duodenum, which can cause just this sequence of symptoms. They might be simulated by the nausea of pregnancy, or by that of a purely nervous character, but rarely or never by chronic dyspepsia. Prolapsus of the stomach may, indeed, cause similar phenomena, but it does so by producing a kink of the duodenum, which itself causes an obstruction.

When, therefore, this train of symptoms occurs, the physician should not lose time by a vain indecision. If he can find no other cause for the trouble, and it persists in spite of all his remedies, it is his duty to call in the surgeon to give the relief which medicinal means cannot possibly supply. This is especially the case when the patient, previously healthy, is steadily losing weight and strength, though it must be remembered that both tumors and

strictures are apt to result from old ulcers and inflammations which have caused trouble during previous years.

If I have gone more into detail in the discussion of the diagnosis of pyloric stenosis than might seem necessary, it is because there is no class of cases which, in my judgment, demand so imperatively surgical aid, in which there is so much unjustifiable delay on the part of the general practitioner.

The profession seem to be hampered by old traditions, and unable to distinguish between other chronic digestive troubles and those due to obstruction. It would, perhaps, aid in stimulating to more decided measures if it were borne in mind that these other troubles may themselves be more amenable to surgical than to medical treatment, for many so-called dyspepsias are caused by inflammations of the gall-bladder or by gall-stones, and many ulcers of the stomach, which have resisted the efforts of the physician, have finally yielded to a gastro-enterostomy. Dr. Walker, of Detroit, has had much success of late in applying the same surgical remedy to indigestion caused by gastric ptosis. There may be some excuse for physicians who hesitate on account of a doubtful diagnosis, but there can, it seems to me, be only one opinion as to the duty of one who has diagnosticated any given case as one of pyloric obstruction. In such cases there can be no relief except by the knife, and the failure to relieve means the sentence of death to the patient.

A large number of these cases are of benign stenoses in which a successful gastro-enterostomy means a permanent cure. Of the tumors of the pylorus, many are fibrous or adenomatous, and a tumor in that region should, therefore, never be assumed to be cancerous. I have just had occasion to correct a diagnosis upon a patient upon whom I operated nearly three years ago. His case was very instructive in many ways. He was a gentleman of 68 years when I first saw him, who was steadily failing in strength on account of a pyloric obstruction. There was a tumor to the right of the navel as large as a hen's egg. He could retain no food on his stomach for more than a few hours. The contents of the stomach, when tested, showed the absence of hydrochloric acid and the presence of lactic acid. On opening the abdomen an irregular tumor was found at the pylorus as large as a hen's egg, and enlarged lymphatics could be felt in the mesentery.

I made a gastro-enterostomy by the elastic ligature. He recovered completely and regained his strength to such a degree that he travelled all over the country attending to his large lumber and mining interests without any inconvenience whatever. His

first operation was done on September 15, 1900. He continued in good health until the middle of June, 1903, when attacks of colicky pain began, which were believed to be caused by the spread of the cancerous tumor to the neighboring viscera. These continued with occasional ameliorations until July 9th, 1903. He was then at Algoma at a summer hotel. There supervened then a sudden attack of obstruction of the bowels, with fecal vomiting. It was two days before I saw him, but as soon as he was brought to the hospital I operated on him. I found that the trouble was entirely independent of the original pyloric tumor. The obstruction was caused by a cancerous tumor of the transverse colon, which had completely occluded that organ. He died shortly after the operation, and I made a post-mortem. To my surprise I found that the original pyloric tumor, which I had believed to be cancerous, had nearly disappeared. The pylorus was thickened and contained some small tumors projecting from its mucous membrane. There were some calcified lymphatic glands in the mesentery. There were absolutely no adhesions anywhere. At the Detroit Clinical Laboratory, to which the specimens were sent for examination, the pyloric tumor was found to be an adenoma, and that of the colon a cancer. The orifice between the stomach and jejunum made by the elastic ligature was large and perfect. Now this illustrates the extreme difficulty of deciding upon the character of a pyloric tumor without a microscopical examination.

In this case we had every reason to believe that the hard pyloric mass and the swollen lymphatic glands were cancerous. There was a rapidly growing obstruction, and the test breakfast showed the entire absence of hydrochloric acid. The tumor, when exposed, felt like a cancer and looked like a cancer, and yet when the irritation produced by the obstruction was removed by a gastro-enterostomy, the tumor began to grow slowly smaller and was disappearing when a new tumor of different kind growing in the colon caused his death.

I have no doubt that the original trouble had been practically cured by my first operation. Now, if when he first began to suffer from that peculiar intermittent colicky pain which characterizes a beginning intestinal obstruction, I had promptly operated, I might by an excision of the cancerous mass in the colon or by an entero-enterostomy have still further prolonged his life. This was not done because I believed that the trouble was caused by the invasion of the surrounding intestines by the pyloric tumor—a condition which would have made an operation of no avail. It was one of those lessons which the practical surgeon every now

and then meets with, which tells him that no case should be despaired of until we have exhausted every possibility of cure.

When the pyloric tumor is cancerous, it does not forbid, but rather urgently indicates an operation. That which kills the patient is not the tumor but the obstruction. He actually starves to death. The cancer, if not eradicated, would sooner or later kill, but in the meantime, the patient relieved by a gastro-enterostomy, would have his life prolonged from one to five years. For these reasons, then, I urgently insist that we are not justified in withholding from patients a means of relief which, in many cases, would promise a permanent cure. If on entering the abdomen the surgeon finds that the case is not one of obstruction, he should examine the stomach to see whether a displacement causes a bend or if an ulcer has produced unusual symptoms. In either case, a gastro-enterostomy would give relief. In case there were gall-stones and evidences of inflammation around the gall-bladder, they could be operated on and the symptoms relieved, and thus in the rare cases in which the typical symptoms of pyloric obstruction were caused by other maladies, the operation would still be of service to the patient.

While the conditions which necessitate operations for the production of anastomosis in the small and large intestine are nearly the same as in pyloric stenosis, there are nevertheless peculiarities due to the position of the trouble which should be noticed. Stenosis of the duodenum between the orifice of the bile ducts and the stomach, presents about the same symptoms as pyloric obstruction. Beyond that point bile will always be present in the vomit if the bile ducts are open. A stenosis in the third part of the duodenum, or at the junction of the jejunum, will usually be marked by a great distension of gut to the right of the median line before vomiting begins. The vomiting may, indeed, be postponed until the patient is nearly moribund. This comes from the inhibiting action which is caused by a distension of that part of the duodenum on the motility of the stomach. I saw this manifested in my first case of vicious circle, in which the contents of the stomach instead of entering into the efferent limb of the jejunum passed into the duodenum. That viscus and the stomach both became enormously distended, but vomiting did not take place until the patient was moribund. This fact has a very important indication as regards surgical practice for the reason that gastro-jejunostomy would be of no avail in a stricture of the third part of the duodenum, for that bowel, becoming distended, would prevent the contractions of the stomach which are necessary to force the food through the artificial opening.

Stenoses of the jejunum, ileum, and sometimes colon, when incomplete, are manifested by the violent contractions, often visible through the abdominal walls, which the bowel is forced to make in order to empty itself through the narrow ring, by the extreme colicky pain caused thereby, and by the gurgle which announces the success of the movement and the consequent relief. I have met with this symptom only once in stricture of the large bowel, in the case, namely, of colonic cancer, which I have just reported. This patient manifested it so markedly that I was deceived in diagnosis, and thought that I had before me a stricture of the small intestine. Ordinarily a stricture of the colon causes a slowly growing distension with a general malaise and a toxemia resulting from fecal absorption. In many cases, however, the growing obstruction causes little inconvenience until, all at once, as the result of congestion or fecal accumulations behind the strictured point, the most violent symptoms arise of acute obstruction. The surgeon is then surprised to find the bowel so completely occluded as hardly to admit a lead pencil through the diseased part. The indications, then, for an intestinal anastomosis, are chronic or sub-acute and partial obstructions, displacements of the viscera which interfere seriously with their functions, and ulcers and inflammations otherwise incurable. In this last named case the relief is attained by making a new channel for the stomach contents, and thus relieving that viscus from the long retention of food and the friction which arises from its own churning action. They are indicated in acute obstructions only as a means of repair. They are contra-indicated when the stomach has lost its motor force, for in that case the chyle could not pass into the intestine even though there were a free and unobstructed opening; so, too, from conditions already stated, they could not avail in strictures of the third part of the duodenum or the beginning of the jejunum. In some cases, too, a total excision of the diseased area might offer a more permanent cure and be preferable.

It is a curious fact, which illustrates the caution with which statistics should be received without careful study, that gastro-enterostomy, an operation not in itself dangerous, has a mortality record nearly as great as that of pyloric excision. The reason of this is evident—it has been the operation of last resort in nearly moribund patients. Many surgeons make a practice of excising a pyloric tumor when the case is hopeful and making a gastro-enterostomy when it is desperate. That a man thus operated on, when his stomach has become highly inflamed, and when he himself is at the point of death from starvation, should die, indicates

not that the operation as such is dangerous, but that it has been too long postponed. It happens not infrequently that a surgeon begins an operation expecting to make a pyloromy but, finding that procedure impracticable, makes a gastro-enterostomy in hope of giving a temporary relief.

As regards the mortality ratio, it varies widely in the practice of various surgeons. That it should depend, in a measure, upon the skill of the operator is self-evident, but there are other factors which influence the result in an even greater degree. Conservative surgeons who refuse to operate on patients who have passed the safety line will show exceedingly favorable statistics, for the majority of such will recover. He who operates, as I have done, in all stages of obstruction, cannot fail to lose many patients. It is a question whether it pays to operate on cases so desperate that only now and then one recovers.

Speaking generally, and with reference solely to pyloric obstructions, the operation will be usually successful so long as the ejecta consist solely of food and colorless mucus, and the cases become more and more hopeless as the vomit becomes green and finally black. The safety line may be measured in most cases by the color and character of the vomit. When it assumes a green hue we may know that the disorganization of the stomach has begun, and when black, that it is nearly completed.

I think it right to give the patient every reasonable chance, but I now refuse to operate when a black fluid oozing from the stomach indicates an early death. Statistics will become more favorable when the general practitioner arouses from his apathy and ventures to urge upon his patient an unwelcome operation. There are certain nationalities whose members will invariably resist all such attempts, but the duty of the physician is to give good advice, even though he cannot secure obedience.

The question of method is an all-important one to the surgeon who would make an intestinal anastomosis. Of the many procedures which have been introduced for this purpose, there are only three which can, at present, claim consideration, the use of the others having been abandoned or, at most, confined to single operators. These are, the suture, the Murphy button and the elastic ligature.

Of the suture and the Murphy button I shall have little to say, as they are too well known to all practical surgeons to require description. I shall, however, compare them with the method by elastic ligature, which has only recently succeeded in gaining favorable attention.

As early as 1891 I had operated for intestinal anastomosis by

the elastic ligature. The patient recovered from the operation and ceased to vomit, but died on the fifteenth day, of diarrhea and starvation. Adopting the plan recommended at that time by Lucke, I had united the stomach with the nearest presenting coil of small intestine. This error in technique caused the loss of the patient, as the post-mortem showed a magnificent anastomosis of the stomach with the ileum, at a point only 91 centimetres from the ileo-cecal valve. I published the case and described the method in a paper read before the American Medical Association and published in its journal of May 16th, 1891. The paper and the method fell dead and attracted no attention. I myself soon became enamored of the Murphy button, and used it in preference to my own procedure.

That which attracted me especially to Murphy's device was the possibility of administering food immediately after the operation, while the elastic ligature required an abstinence of three days while it cut its way through. It was not until further observation of ten years had taught me that it was not desirable that even the most fluid and blandest food should be thrust into an injured stomach directly after the operation, that I recurred to my own, as I now believe, superior method.

In most cases, the stomach refuses to contract during the first two or three days, and food or medicine put into it is liable to be retained there during that time. In the fall of 1900 I returned to my ligature operation with successful results, and am now in position to report many confirmations, on the part of distinguished American surgeons of its efficiency.

The application of the elastic ligature as a means of producing an intestinal anastomosis is very simple. The two viscera are brought together, and the surgeon connects them with a single line of Lembert sutures, a little longer than the desired opening. The rubber cord is then, by means of a large needle, passed through the walls of first one and then of the other bowel, and tied firmly in a single knot. Before tying it, however, a silk thread is laid under the knot, and, after the knot has been firmly tied with the rubber stretched to its utmost, the silk thread is made to fasten it in place. Both threads are then cut short and the Lembert suture is now completed so as to form a ring inclosing the rubber. In passing the rubber through the gut it should be put upon the stretch in order to lessen the size, and drawn slowly and carefully through in order not to tear the gut. It is not necessary to say that the rubber should be first-class, and fresh, for old rubber is apt to break.

The advantages of this procedure are: First, its simplicity and

quickness of application; second, its aseptic quality, for the rubber fills the openings through which it passes so completely that no extravasation is possible; third, the delay in opening the passage until the intestines have become well glued together, and, fourth, the ability to make with it a communication of any desired length. If we compare it with the incision and suture, it is more easy and quickly of performance, much more aseptic, and is accompanied with much less hemorrhage. If with the Murphy button, it is less liable to meet disaster from faulty technique, causes no loss of blood, is more aseptic, and it leaves no foreign body in the bowel.

The following history is interesting, as illustrative both of the dangers which may arise from the use of the Murphy button in the hands of a very competent surgeon, and of the condition of the gastro-intestinal anastomosis eight days after the application of the ligature. Dr. Max Ballin, surgeon to the Detroit Sanitarium, had two cases of gastro-enterostomy by the elastic ligature. One recovered without any complication whatever. In the other, fearing a vicious circle, he made a second anastomosis between the loops of the jejunum by the Murphy button. The history of the case, as reported by himself, is as follows:

Mrs. S. B.; 35 years old. Previous history: At 18 years, chlorosis and a severe hematemesis. Since then suffered frequently from vomiting, pain after meals, etc. In last three years vomited more frequently, and in large quantities, great loss in weight; lived mainly on liquid diet. Washing of stomach gave only temporary relief. Examination showed: Weight 98 pounds (at the age of 18 patient weighed 132 pounds). Stomach dilated below umbilicus. No palpable tumor. Operation on February 14, 1903. Abdominal section showed greatly dilated stomach, near the pylorus hard scar tissue. Fundus nearly 5 inches lower than pylorus. Anterior gastro-jejunostomy after McGraw. Entero-enterostomy of afferent and efferent loops of jejunum by Murphy button. For four days patient was in splendid condition. On February 19 sudden collapse and vomiting. Symptoms of peritonitis. Patient died on February 22. Autopsy showed: Perforative peritonitis. New communication between stomach and jejunum perfect; the rubber ligature had entirely cut through, the edges well united. On the place of anastomosis between the loops of the jejunum a perforation an inch large. The button not found on the place of the anastomosis.

Had there been no post-mortem examination the onus of causing death in this case might have been laid on the ligature-operation, as the less known and consequently less trusted pro-

cedure. The consideration which is, I find, the deterring factor in preventing the trial of this method by surgeons to whom it is a novelty, is the fact that the surgeon is not able to see the orifice produced by the ligature. He closes the abdomen on still intact intestines, and is obliged to put his trust in the slow, unseen action of a constantly contracting rubber cord. He desires the evidence of his senses, but is obliged to put faith in things unseen.

It is only after repeated trials of its efficiency that he learns to have confidence in a procedure which is certainly the simplest, and as I believe the least dangerous, of all methods for making an intestinal anastomosis.

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### IMPETIGO CIRCINATA.

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BY GRAHAM CHAMBERS, B.A., M.B., TORONTO.

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At the present day the term impetigo is applied to several eruptions of the skin caused by pyogenic bacteria. In some ways this classification is unsatisfactory, as two or three of the eruptions are distinct clinical conceptions. This is recognized by Unna, Sabouraud, and other investigators, who have attempted to solve the question of the role of pus germs in diseases of the skin.

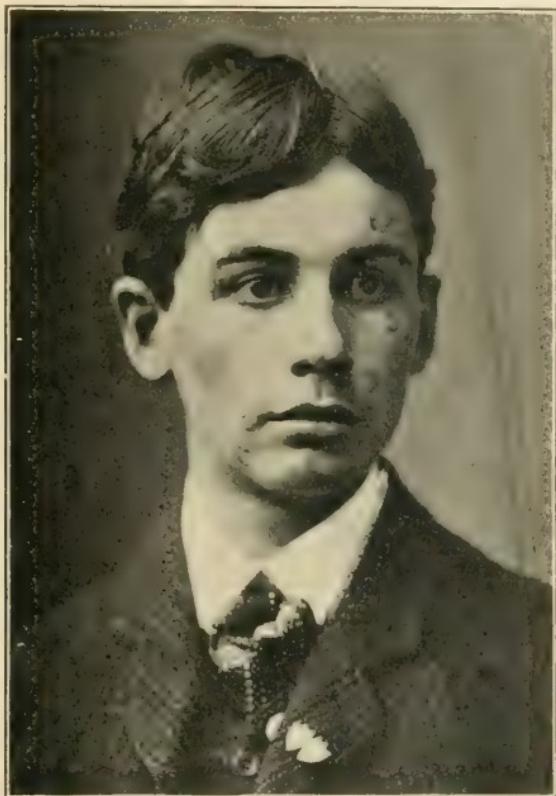
Unna believes that there are at least four distinct impetigos, namely, impetigo contagiosa of Tilbury Fox, impetigo staphylogenous, or impetigo of Boekhart, impetigo circinata, and impetigo streptogenous.

Sabouraud makes two divisions cover the whole field. He believes that the streptococcus causes impetigo contagiosa of Tilbury Fox, while the impetigo of Boekhart is always due to *staphylococcus aureus* or *albus*. Other physicians who have investigated the question, hold views not in accord with either of the above authorities. It is quite evident, therefore, that the question of impetigo is as yet in an unsettled condition. There are several reasons why this should be so, probably the principal being our somewhat limited knowledge of the nature and action of pus germs.

From a clinical standpoint it appears to me that there are at least three distinct skin diseases which are now classed with the

impetigos, namely, impetigo contagiosa of Tilbury Fox, impetigo of Bockhart, and impetigo circinata. In addition to these one meets with cases which, from the characters of the lesions, do not appear to belong to any of the above eruptions. These may represent other forms of impetigo, or be due to mixed infection.

Impetigo contagiosa is a very common disease, particularly



in children. It is characterized by the formation of vesico-papules, vesicles, or blebs, the contents of which tend to become sero-purulent or purulent. In two or three days, these lesions are replaced by yellowish-green or yellowish-brown crusts. The eruption extends by fresh inoculation. The lesions are superficially situated in the skin. The disease rarely, if ever, leads to

the formation of furuncles. This character suggests that *impetigo contagiosa* is not due to the infection of *staphylococcus aureus* or *albus*, which is the exclusive germ of boils. Impetigo of Bockhart is of extreme interest as it has the same etiology as coccogenic sycosis and furunculosis. The lesions are always pustules, and are always situated at hair follicles. The impetigo pustule is superficially situated, and soon dries up to a thin crust. However, in nearly every case of this type of impetigo, the *staphylococcus* invades more deeply into the follicle, producing folliculitis, furuncles, whitlows, etc. On the other hand, a boil may be the starting point of an eruption of impetiginous lesions. This is frequently observed in the skin in the vicinity of boils.

Impetigo circinata, the form to which I wish to draw special attention, is quite a different type of disease. In contrast to *impetigo contagiosa*, it is most frequently found in adults. The disease is usually contracted in barber shops, and is highly contagious. During the past five years it has been very prevalent in Toronto. Scarce a month passes without a number of cases, generally traceable to a common source, being brought to my notice. In each outbreak there has been from two to thirty cases. The barber shop is such a common source of infection that I usually designate the disease "Barber's impetigo."

The characters of the lesions are usually well defined. They are, as a rule, situated on the face, forehead, ears or neck. In a few cases I have observed small lesions on the wrists. The appearance of the eruption is frequently preceded for some hours by slight itching. The lesions are primarily small, vesicles about the size of the head of a pin. They are rarely observed, as they readily rupture, leaving a small exuding surface. This increases in size by centrifugal extension, forming lesions varying in size from a split pea to a quarter of a dollar. The surface of these lesions is either moist, exuding a clear serous discharge, or covered with crusts. The process of vesication may sometimes be observed in the periphery of the lesions in the form of a slightly-raised ring, hence the name *impetigo circinata*. Vesicles or pustules, except the minute vesicles which are sometimes observed in the early stage of a lesion, are never seen; nor does the infection ever extend deeply in the follicles. In fact, the superficial character of the eruption is one of the most marked symptoms of the disease.

The lesions as a rule are discrete. However, in a small proportion of the cases they coalesce, forming a patch covered with crusts and sero-purulent exudate. The eruption then resembles

very closely pustular eczema. According to my experience, this confluent type of impetigo circinata is found more frequently in children than in adults. In two cases in one family, which recently occurred in my practice, the father had the discrete, while a girl of three years of age had the confluent form of the disease.

With regard to the bacteriology of impetigo circinata nothing definite is known. It is believed to be due to a pus coccus; but the particular germ has not been isolated. During the last two years I have frequently grown cultures on agar from the exudate of the lesions. When the lesions were fresh then as a rule a pure culture of staphylococcus albus was obtained; but cultures made from older lesions usually had a yellow color, due to staphylococcus aureus. These results suggest that the disease is caused by staphylococcus albus.

The diagnosis of impetigo circinata presents few difficulties. It has to be differentiated from pustular eczema, and other forms of impetigo. When the lesions of impetigo coalesce, the resemblance to pustular eczema is very marked; but the history of the development of the eruption of impetigo from isolated foci, together with the presence of discrete lesions in the skin in the neighborhood of the large patches, will give the clue to the diagnosis. Moreover, in eczema there are other symptoms, such as intense itching, more or less infiltration of the skin, etc., etc.

Impetigo circinata differs from impetigo contagiosa by the absence of vesicles and pustules, except the tiny vesicles which may be occasionally seen at the commencement of a disease, and the slight vesication or pustulation at the periphery of a lesion, while it is increasing in size. On the other hand, in impetigo contagiosa vesicles, blebs, or pustules are usually present. Moreover, impetigo contagiosa is essentially a disease of childhood, whereas impetigo circinata usually occurs in adults.

The lesions of impetigo of Bockhart are, as a rule, quite different from those of the circinate form of the disease. In the former the staphylococcus invades the hair follicles, producing folliculitis and furuncles, which are never seen in uncomplicated cases of impetigo circinata.

The treatment of the circinate form of impetigo which has given me the best results, is quite different from that of the other forms of the disease. In impetigo contagiosa a mild antiseptic, such as diluted ammoniated mercury ointment, effects a cure in a few days.

In the impetigo of Bockhart the same treatment may be used; but where the staphylococcus has set up a folliculitis epila-

tion is usually required. In some of these cases lotions are more efficacious than ointments. Shaving of the diseased areas as a rule is useful. In impetigo circinata the medicinal agents should always be applied to the lesions in the form of lotions. They should be antiseptic, soothing and astringent. If the lesions are irritable and moist, I have found that ointments are useless. This I think is an important observation, as it is usually taught in textbooks on dermatology that application of antiseptic ointments is an efficient form of treatment in all the forms of impetigo. The lotions that I have found most useful are those containing sulphur, blackwash, zinc sulphate, lactate of lead, boric acid or acetate of aluminium. In many cases a lotion containing 2 drams of precipitated sulphur in 4 ounces of lime water makes an excellent application. When the lesions become confluent and the characters of the eruption approach in appearance those of pustular eczema, then I treat the case in a manner similar to that which I use for moist eczema. I remove the crust by a boracic acid poultice, and then apply a lotion containing 1 dram of liq. plumbi subacet. to 4 ounces of milk. A very good plan is to apply a boracic acid poultice during the night, and the lactate of lead lotion every hour during the day.

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## CASE REPORTS OF SYPHILIS, WITH REMARKS.\*

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BY JAMES ROSS, M.D.,

Dermatologist to the Victoria General Hospital, Extra-Mural Lecturer on Skin and Genito-Urinary Diseases, Halifax Medical College.

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Case 1.—J. H. M., aged 47, a ship carpenter. When first seen, on October 24th, 1902, he complained of a "breaking-out" on the back part of the thigh, which had existed for three years. When examined, there was found to be a serpiginous eruption, with a well-defined margin and three or four small, punched-out ulcers, situated at intervals near the outer border of raised margin. The eruption was semi-circular in form, and was about six or seven inches in length. This condition had been diagnosed as "King's Evil"—so the patient said—by his former medical

\*Read before meeting of Maritime Medical Association, St. John, July 23rd, 1903.

attendant. At all events, he had received no internal treatment for the disease, which gave the picture of a deep serpiginous or ulcerating syphilide. On increasing doses of iodide of potassium, with local antiseptic treatment, the eruption disappeared and the ulcers filled up nicely. The initial lesion had been acquired ten years previously, which was followed by secondary symptoms, but treatment had not been persevered with.

Case 2.—A. J. M., aged 49, a farmer. First seen on February 9th, 1903, complaining of sores on the back. Two and a half years before the sores first appeared, gradually spreading till a large area was covered. When I first saw him there was a widespread margin, and scattered here and there were ulcers of different sizes. The skin over which this spreading eruption had travelled was thin, white and parchment-like, due to the scarring produced by the serpiginous ulceration.

The patient said eruptions began a few days after an accident, when his left forearm and thigh had been fractured by being thrown from a team.

There was a history of a chancre twenty years ago, but he did not remember having a rash or other symptoms of syphilis. After prescribing iodide he rapidly improved; in six weeks no sign of eruption, and ulcers had completely filled up.

Case 3.—A young lady, aged 26. First seen on May 13th of 1903, complaining of a rash on arms, legs and body. The history, as given by the patient, was that about the 1st of March last a fine rash of a pinkish color appeared, affecting most of the body, which was accompanied by much itching and burning. The spots gradually got larger and brighter, and the itching became more intense. The rash, when I first saw it, was very extensive, covering the arms thickly as a large papular rash, varying from a pea to a five-cent piece, and covered by grayish scales. Some on the back, which was also extensively covered, were even larger, but showing the same characteristics. The color was the well-known raw-ham shade. The palms of the hands also showed several discrete lesions having a punched-out appearance, but superficial, which is most characteristic of syphilis. There was likewise marked glandular enlargement present.

The appearance of the eruption on the body might easily have been mistaken for psoriasis; but on careful examination I found that the condition present was a papulo-squamous syphilide, which, in some of the older books was termed "syphilitic psoriasis."

This patient gave no history to throw further light on the subject. She evidently had some idea as to the nature of the

trouble, but resented any suggestion as to the most probable way in which it was contracted. It had been diagnosed as eczema and also psoriasis, no suspicion of the real trouble ever entering the minds of the other two doctors who had previously examined her. And no wonder; here was a case much resembling psoriasis guttata, with a history of intense itching, but nothing further to clear up the mists of doubt. The complaint of itching I did not place much reliance on, and thought it evidently a blind to throw unsuspecting diagnosticians off their guard. However, I ordered an antipruritic lotion, which she said gave her much relief. Mixed treatment was also prescribed, and soon rapid improvement followed. When last seen, five weeks after starting treatment, the rash had disappeared, leaving nothing but slight pigmentation.

Regarding Case 2.—Whether the accident to this patient had any connection with the eruption which followed, it is difficult to decide, though it is known that an accident to a syphilitic person is sometimes followed by some manifestation of the disease at the site of injury. The patient referred to believed he fell on his back, but the fractures received were naturally of more moment. At all events the eruption started about a week after the accident, while lying on his back, so that possibly the continuous pressure over the same situation may likewise have had some influence as an exciting cause.

I remember a very interesting case which was under the care of Dr. Chisholm at the Victoria General Hospital some years ago. A young man, about 18 years of age, was kicked on the knee by a horse one year previously; breaking down of the tissues and deep ulceration followed. He had been treated faithfully with tonics, and different antiseptics used locally, but to no avail. When he arrived at the hospital, the ulcer was about six inches in diameter, and considerably deep at the centre of the floor. A consultation was held to consider the advisability of amputation. Noting the punched-out appearance and other typical manifestations present, I suggested iodide of potassium, which was soon followed by improvement and cure. There was no history to be obtained, but the picture was there nevertheless. It is probable some inherited taint was present in this case.

Two years ago a woman consulted me about a rash on her arm, which, on examination, proved to be a superficial serpiginous syphilide, that on appropriate treatment disappeared. Some six months afterwards her husband consulted me about a sore finger. Six weeks before I saw him, he and another fellow on board a steamer had an altercation in which his opponent bit his

forefinger. It swelled up and considerable thickening developed around the site of injury. Antiseptic and other treatment had been carried out by another doctor, but still the wound did not heal nor the induration disappear. Remembering the case of his wife, I administered iodide of potassium, and it was remarkable how soon recovery ensued.

There is no doubt that considerable carelessness is manifested at times in the diagnosis of syphilitic cases. Why should we not put every doubtful case on antisyphilitic treatment? History does not always help us, as evidenced by Case 3, and others to which I have alluded. Never mind who the patient is or from what particular "good" family has he come. There may be a syphilitic taint somewhere, either inherited or acquired.

Then there is the other extreme. There are practitioners to be found in this enlightened century who have only to see or even hear of some kind of sore on the penis to jump at the conclusion that it is the initial lesion of syphilis. There are others, again, who are consulted by a patient with some kind of a profuse rash over the body and at once conclude it is of syphilitic origin, particularly if the patient has been known as "one of the boys."

A patient came to me some years ago with a well-marked rash of seborrheic eczema on the front and back of chest. There was not much trouble in the diagnosis, but he then told me that three other medical men had called it a syphilitic rash, for which he had been swallowing mercury pills for many months. The rash at times slightly improved, but nevertheless persisted under the treatment mentioned. The patient was very anxious to tell all, but was positive that he never had any other venereal trouble but gonorrhea. However, the knowledge of contact with women of all kinds and the presence of a rash was enough evidence for some medical men he had consulted.

Another patient consulted me some years ago suffering from angio-neurotic edema, which involved the tongue and different parts of the face. Many years previously he had contracted some sores on the penis, which his medical adviser diagnosed as of syphilitic origin, and without delay prescribed mercury, which patient had faithfully kept up for a long period. Sometime after he got married, and raised a family of as healthy-looking children as can be seen anywhere. One morning, finding half of his tongue swollen and also part of his face, he hastened to his medical attendant of many years before, who told him this was a manifestation of the old disease, so mercury and iodides were once more called into action. However, the swelling would

come and go, no improvement taking place from the remedies mentioned. He then consulted me, and I came to the conclusion that the trouble from which he was then afflicted was of a different nature, and, after thorough questioning, likewise concluded the patient never had syphilis. He was an intelligent man, gladly answering questions and sure of the conditions which had years ago existed. There had been several sores present, which, with a clear history of a short incubation stage, pointed to chancroids.

Again, there are patients who have had syphilis and who manifest some other skin affection which is at once diagnosed by the medical attendant as of syphilitic origin. Why should not such a patient be affected with a skin disease entirely remote from syphilis?

Not long since a case in this city suffered from a very severe skin affection, which resulted in death. There was a suspicion of a syphilitic history, yet mercury and iodides did no good. When the death certificate was written, the disease was stated as — following syphilis. The contents of that document became widespread, and possibly may have proved a valuable object-lesson. It is probable, however, that the disease which proved fatal had no connection with syphilis, unless, of course, the tissues, modified by syphilis, rendered him more susceptible to the encroachment of some other serious malady. At all events, the authorized treatment was of no avail. Examples of lowered vitality predisposing to other diseases are a common experience in the daily routine of most practitioners.

To recapitulate: it would be advisable to give all doubtful cases antisyphilitic treatment, but always insist on watching the further progress of the case.

On the other hand, do not rush to prescribe mercury when viewing an initial lesion of the genitals, but rather "make haste slowly" until sure of your diagnosis.

## THE TREATMENT OF FACIAL DEFORMITIES BY THE SUBCUTANEOUS INJECTION OF PARAFFIN.

BY GEORGE K. GRIMMER, B.A., M.D. (EDIN.)

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Montreal General Hospital.

It is now three years since Gersuny, of Vienna, published a description of his *subcutaneous prosthesis* by the injection of melted paraffin; thus introducing a method of removing certain deformities which surgery had not previously been able to cope with successfully.

Some years before Gersuny recommended the injection of paraffin, Corning, of New York, had made experiments, in which he had injected solidifying oils, and had established the important fact that such substances can be injected without producing any serious inflammatory reaction; but the idea of utilizing paraffin for the effacement of physical imperfections was conceived by Gersuny, who first injected it into the scrotal sac of one of his patients to produce an artificial testicle. The possibility of building up flattened noses soon suggested itself to him, and was speedily put into practice. Since then surgeons in many parts of Europe and America have taken up his method, and with few exceptions, have met with highly gratifying results. I believe the first case of the kind reported in the United States was by A. C. Heath, of Chicago, in December, 1901, and, in Canada, two by the writer in September, 1902.

Among the numerous defects that have been successfully treated by the injection of paraffin, may be mentioned: Incontinence of urine; prolapse of the uterus; prolapse of the rectum; and cleft palate. It has, also, been used with success to build up sockets for artificial eyes. But it is in the field of cosmetic surgery that it has found its greatest utility, and it is for such ailments as the following that I would specially press its claims, namely:

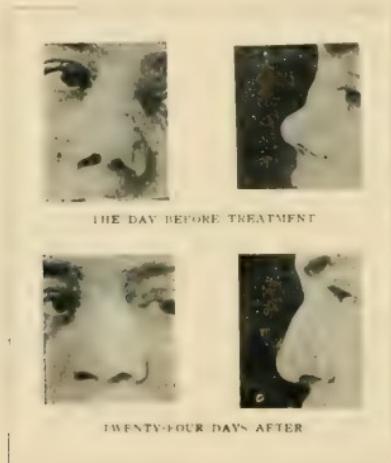
To build out depressed or flattened (saddle-back) noses and receding chins, to fill up the depressions frequently left by frontal sinus and mastoid operations, and by excision of the upper or lower jaw, and other such defects as destroy not only the symmetry and presentability of the face, but also not infrequently the happiness of the unfortunate sufferer.

*The Kind of Paraffin Required.*—Much diversity of opinion

has been expressed by various authorities regarding the most satisfactory paraffin for this operation, that is to say, paraffin of what melting point gives the best results? In Gersuny's early cases he used paraffin melting at 104 F., and in recent writings he still recommends the softer variety.

Eckstein made a series of experiments on animals with paraffin melting at various points, and has declared a preference for those melting between 132 and 140 F.

In July, 1902, I injected 10 cc. of paraffin, melting at 102 degrees, beneath the skin of a rabbit's nose, and an equal quantity at 107 degrees and 112 degrees in the same situation in two others. I also injected a few drops into the anterior chamber of



one eye, and 10 cc. into the abdominal cavity of each rabbit, always using in the same rabbit paraffin of a uniform melting point. These animals are still living and healthy. There was some reaction in each of the eyes into which the paraffin was injected, but it passed off after some weeks. Of the three before mentioned experiments, the nose built up with paraffin at 112 has given the best result, having maintained its shape unchanged to the present time, while the paraffin at 102 F. after a few weeks ran to one side of the nose, causing it to be unsymmetrical.

In August this year I made a further injection with paraffin melting at 115, 120 and 130 F., under the skin of the neck just behind the ears of the same rabbits; no noticeable reaction re-

sulted in any. Phannensteil and Paget are in favor of paraffin melting at 115 degrees. My own view is that paraffins from 112 to 120 degrees are best; the choice between the softer and the harder being determined by the requirements of the case, that is, according as we desire a more or less firm support for the uplifted tissues.

*The Syringe.*—The points that constitute a good paraffin syringe are the following: That it be made of solid metal, with a solid metal platen, have a capacity of about two teaspoonfuls, and have both a piston and screw action. The needle should be about the size of an ordinary antitoxine needle, but shorter, and may be curved or straight. I have found Eckstein's method of



THE DAY BEFORE TREATMENT



TWENTYNINE DAYS AFTER

covering the syringe with rubber tubing a most satisfactory one for the retaining the heat of the paraffin.

*Preparation of the Paraffin, Syringe and Needle.*—These must be sterilized and placed in sterile lotion at 120 F., until required.

*The Operation.*—The site of operation having been rendered surgically clean, the operation may be performed under local or general anesthesia, the former being sufficient in many cases. When local anesthesia is used, care must be taken not to inject more than a few drops of the anesthetic, as a larger quantity would, in some measure, mislead as to the amount (of paraffin) required. Immediately before injecting the paraffin, the syringe

is filled and tried, and special attention given to the junction between the needle and syringe to see that it is perfectly tight. The point of the needle is then placed in boiling water for a few seconds, and inserted at once into the tissues, before the paraffin has time to harden in the needle. The needle puncture should be made 1-2 inch or more from the depression, and carried a little beyond the point of greatest deficiency, making sure that the tissues around the defect to be filled up, are firmly compressed by an assistant, to prevent the escape of the paraffin into an undesirable position. The piston is then slowly and continuously screwed in until sufficient has been injected; meanwhile, the point of the needle can be moved about as desired. After a few seconds, the needle is withdrawn. The operator should continue moulding the paraffin for fifteen or twenty minutes, until it has become thoroughly set. Should the needle clog, so that a moderate amount of pressure will not remove the obstruction, it should be withdrawn and reheated, since cases have been reported in which the needle has burst when an attempt has been made to force out the hardened wax by great pressure on the piston. In operations upon the nose, I have found the manipulations easier when the needle was inserted from near its point. The paraffin is best injected in a semi-solid condition, too little, rather than too much, being used; since a second injection can always make good any deficiencies caused by too small a primary one, while the removal of a surplus is more difficult, and there is much greater danger of hyperemia, and even sloughing, when high tension in the tissues has been caused by an over-injection. The quantity of paraffin required varies with each case from a few drops to many centimetres.

*The After-Treatment.*—Flexile collodion should be painted on the needle punctures and cold astringent compresses applied for some hours. Any swelling that has occurred in my cases had disappeared in three or four days under this treatment. Some caution is necessary in the use of cold astringent compresses, as too vigorous an application of them might cause necrosis of the overlying skin.

*The Dangers of Paraffin Treatment.*—Accidents and unfavorable results following the injection of paraffin have been few, and have resulted chiefly from embolism or over-injection; but since it has become the custom to inject paraffin in a semi-solid condition, I have not seen any case of embolism reported, and with care in entering the needle, it should not occur. Meyer has claimed that paraffin when injected is toxic; this is now an exploded theory, at any rate for paraffins melting above 110 F.

Suppuration may follow if the operation has not been performed aseptically, but I have only seen an account of one case in which it has occurred. Necrosis of the overlying skin may result when too large a quantity has been injected, or when the paraffin has been injected into the skin and not beneath it, and is caused by the extreme tension cutting off the blood supply. Hyperemia of the skin over the injected area has occurred in a number of cases, and is also the result of tension. It may be unavoidable, but as it has disappeared in a large majority of reported cases in from one to two months it is not a serious complication. Connel has reported a case, however, in which it lasted over a year, but was easily hidden by a small amount of face powder.

*What becomes of the Paraffin after Injection.*—Gersuny has claimed that it becomes encapsulated. Meyer thinks it is slowly absorbed, while Stein claims it is replaced by connective tissue. I am convinced, from my own experience, that some absorption takes place in paraffins of melting points between 102 degrees and 112 degrees, when injected into the anterior chamber of rabbits, this I have been able to observe, and the softer the paraffin, the greater absorption, since the paraffin at 102 degrees, which I have injected into that situation in a rabbit, has disappeared to a much greater extent than those of a higher melting point, similarly inserted, and I believe I have also observed that the paraffin was first infiltrated with young tissue elements. However, in the cases in which paraffin has been injected for cosmetic results, little, if any, shrinkage has been observed in the uplifted tissue after a period of two or three years. My own experience of this method has been limited to nine cases, eight of which are still under observation. In all, the results have been good. In my first two cases, I used paraffin melting at 104 degrees, one of these was lost sight of after the fourth month; in the other, now after eighteen months, the nose feels soft, but the improved shape has been retained unimpaired, and the skin over the paraffin looks perfectly normal. In three others I used paraffin melting at 112 degrees. In two of these there was some hyperemia of the superimposed skin, which has now almost disappeared after two or three months respectively; in the remainder I used paraffin at 115 degrees, which was injected semi-solid, and which on the whole has given me the best results. In none was there any severe inflammatory reaction, and all swelling had disappeared in from two or three days.

*Points that Recommend the Use of Gersuny's Method.*—(1) It proves successful in removing many facial deformities that have not been treated successfully by any other means. (2) The

results are uniformly good, and the risks few. (3) After the technic of the operation has been mastered, it is easily and quickly performed, and is almost free from pain, even when no anesthetic is used.

In conclusion, I would claim that the sub-cutaneous injection of paraffin has now passed from the experimental stage to that of a sound therapeutic measure, and has been an incalculable blessing to a large number of sorely-afflicted persons, who have sought in vain, from other sources, relief from some unsightly defect of person.

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## Reports of Societies

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### ONTARIO MEDICAL ASSOCIATION, TORONTO, JUNE 14, 15, AND 16, 1904.

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*Audit.*—Drs. D. J. G. Wishart, C. H. Carveth, G. Elliott.

## Therapeutics.

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OUR readers are invited to send favorite prescriptions or outlines of treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.

### **Bronchorrhea**

In bronchorrhea the following combinations are recommended by Danforth in *Amer. Text-Book of Applied Ther.*:

R.	Copaibæ .....	gtt. xx.
	Pulv. opii .....	gr. ii.
	Pulv. acaciae q.s.	
M.	Ft. capsulae No. x. Sig.: One every three hours; or,	
R.	Copaibæ .....	gr. xx.
	Acidi gallici.....	gr. xxx.
	Pulv. acaciae q.s.	
M.	Ft. cap. No. x. Sig.: One every three hours.	

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### **Acute Bronchial Catarrh.**

There is no remedy, according to Yeo, in his *Clin. Ther.*, which so readily relieves the distressing dryness of the mucous membrane in the early stages of acute bronchitis as does tartarized antimony. He recommends it combined with small doses of morphin, codein or opium as follows:

R.	Vini antimonialis .....	ijiss.
	Liquoris morph. acetatis .....	2ss.
	Liq. ammonii acetatis .....	2iss.
	Aq. laurocerosi .....	2ii.
	Syrupi simp. ....	2iii.
	Aquaæ q.s. ad.....	2vi.
M.	Ft. mistura. Sig.: Two tablespoonfuls every three or four hours	

The following combination is sometimes used by the author as a substitute for the foregoing prescription:

R.	Pulv. opii et ipecacuanhæ .....	gr. v.-x.
	Spts. etheris nitrosi .....	2i.
	Liq. ammon. acetatis.....	2ii.
	Aq. camphoræ.....	2iss.
M.	Sig.: At one dose, to be taken at bedtime, followed the next morning by a saline purgative.	

When fever is present the following is of great value:

R.	Tinct. aconiti .....	Mxxiv.
	Vini antimonialis.....	ʒii.
	Liq. morph. acetatis .....	Mxl.
	Liq. ammon. acetatis .....	ʒiss.
	Aq. camphoræ q.s. ad .....	ʒviii.
M.	Ft. mistura. Sig.: Two tablespoonfuls every two or three hours.	

It should be kept in mind, however, when opium, antimony and aconite, or similar preparations are given, that they should be discontinued when the definite symptoms for which they are given have disappeared.

As a stimulating expectorant the following combination is recommended:

R.	Infusi senegæ .....	ʒiii.
	Sodii bicarb.....	ʒi.
	Sodii chloridi .....	
	Ammon. carb., aa .....	gr. xxiv.
	Syr. tolutani .....	ʒiii.
	Aquæ q.s. ad .....	ʒvi.
M.	Ft. mistura. Sig.: Two tablespoonfuls every six hours.	

Dr. N. S. Davis recommends the following mixture in acute bronchitis:

R.	Tinct. veratri viridis .....	ʒiss.
	Vini antimoniij.....	ʒiv.
	Tinct. opii camph.....	ʒiiss.
	Liq. ammon. acetatis .....	ʒii.
M.	Ft. mistura. Sig.: One teaspoonful in a tablespoonful of water every two, three or four hours.	
R.	Ammon. carb.....	gr. xxx.
	Tinct. hyoscyami .....	ʒiv.
	Codeinæ .....	gr. ii.
	Syr. pruni virg .....	ʒiv.
	Aquæ camphoræ q.s. ad .....	ʒii.
M.	Sig.: One teaspoonful every three hours.	

E. Fletcher Ingals recommends the following combination to relieve the cough:

R.	Ext. cannabis indicae .....	gr. ½
	Ext. hyoscyami .....	gr. ss-i.
	Ext. nucis vom .....	gr. ¼-ss.
	Quininæ hydrobrom .....	gr. i-ii.
	Camphoræ monobrom .....	gr. ii-iii.
M.	Ft. capsulæ No. i. Sig.: One such capsule every four to six hours; or:	
R.	Morphinæ sulph .....	gr. i.
	Ammon. carb.....	gr. xxx-ʒi.
	Syr. pruni virg .....	
	Mist. glycyrrhizæ co., aa .....	ʒiv.
M.	Sig.: One teaspoonful in water and repeat as necessary.	

He condemns the use of morphin in the capillary form of bronchitis except in very small doses. Ammonium chlorid or

ammonium carbonate are useful preparations in this form of bronchitis; or a combination of the carbonate and iodid is of value:

B.	Ammon. carb.....	ʒiii.
	Ammon. iodid.....	ʒiii.
	Syr. glycyrrhizæ.	
	Syr. tolutani, ää .....	ʒii.
M.	Ft. mistura. Sig.: One teaspoonful every two or three hours in water.	

Stevens, in *Med. Rev. of Reviews*, recommends the following treatment of acute bronchitis:

B.	Terebini	
	Ol. eucalypti, ää .....	ʒss.
	Strych. sulph .....	gr. i 3.
	Codeinæ sulph.....	gr. iii.
M.	Ft. capsulæ No. xii. Sig.: One capsule every four hours.	

The following is recommended by De Brun in the treatment of chronic bronchitis:

R.	Ichthyol .....	gr. xxx.
	Glycerini	
	Syr. aurantii, ää .....	ʒiv.
	Aqua.....	ʒiii.
M.	Sig.: One-half to one teaspoonful several times daily.	

—*Jour. A. M. A.*

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#### Palmar and Plantar Hyperhidrosis.

M. G. Lyon (*Revue de Therapeutique Medico-Chirurgicale*, quoted by *Nord Medical* for November 1st, 1903), recommends the following:

(a) B.	Decoction of walnut leaves.....	1,000 grammes (33½ ounces).
	Alum or borax .....	10 grammes (½ ounce).
(b) B.	Potassium permanganate.....	25 centigrammes (3¾ grains).
	Water .....	1,000 grammes (33½ ounces).
(c) R.	Tincture of Benzoin .....	10 grammes (150 minims).
	Formaldehyde .....	15 grammes (225 minims).
	Water .....	1,000 grammes (33½ ounces).

The feet or hands should be bathed in any of the foregoing. If, instead of being cold and cyanotic, the members are warm, cold water should be used and the following applications used subsequently:

(a) B.	Ichthyol } of each.....	25 grammes (6 ¼ drachms).
	Lanolin }	
	Water .....	15 grammes (3¾ drachms).
(b) B.	Naphthol .....	5 grammes (75 grains).
	Glycerin.....	10 grammes (150 minims).
	Alcohol.....	100 grammes (3½ ounces).
M.	Use as a lotion twice daily.	

Good results are obtained, too, from:

R.	Quinine sulphate .....	5 grammes (.75 grains).
	Alcohol, 60 per cent .....	100 grammes (3½ ounces).
Or:		
B.	Essence of bergamot .....	20 drops.
	Iron perchloride .....	30 grammes (1 ounce).
	Glycerin .....	10 grammes (2½ drachms).
M.	Lotion.	

Besides baths and lotions, powders may be used, the following being a good example:

B.	Potassium permanganate .....	2 grammes (30 grains).
	Salicylic acid .....	5 grammes (75 grains).
	Bismuth subnitrate .....	30 grammes (1 ounce).
	Talc .....	60 grammes (2 ounces).
M. Dusting powder.		

Inside the shoes may be placed filter paper baked in the following:

B.	Thymol .....	30 centigrammes (4½ grains).
	Potassium permanganate .....	1 gramme (15 grains).
	Distilled water .....	100 (3½ ounces).
M. Foot application.		

—N. Y. M. J. & P. M. J.

#### Cosmetics to Improve the Complexion.

*Nord Medical*, for November 1st, 1903, gives several formulæ said to be valuable in improving the complexion, which may prove useful to practitioners in districts remote from "beauty parlors."

B.	Liquefied oil of cacao .....	.5 parts.
	Castor oil .....	.30 parts.
	Oil of bergamot .....	.1 part.
	Eau de cologne .....	.20 parts.
M. Cosmetic.		
R.	Spermaceti .....	45 centigrammes (6½ grains).
	Paraffin .....	35 centigrammes (5¼ grains).
	Oil of almonds .....	75 centigrammes (11¼ grains).
	Rose water } of each .....	70 centigrammes (10½ grains).
	Glycerin } of each .....	
	Oil of roses .....	1 centigramme (3/20 grain).
M. Apply nightly.		
B.	Oil of roses .....	20 drops.
	Lanolin .....	.85 parts.
	Cacao butter .....	.25 parts.
M. Use nightly.		
B.	Sweet almonds .....	100 parts.
	Bitter almonds .....	.20 parts.
	Rice powder .....	.120 parts.
	Borax } of each .....	5 parts.
	Powdered iris } of each .....	
	Oil of bergamot .....	.1 drop.
	Oil of lemon .....	.3 drops.
M. For use at night.		

—N. Y. M. J. & P. M. J.

## The Physician's Library

*Progressive Medicine.* Vol. IV., December, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 434 pages, 46 illustrations. Philadelphia and New York: Lea Brothers & Co., Publishers.

The completing volume of "Progressive Medicine" for the year 1903 contains some of the most important contributions of the series. Dr. J. C. Hemmeter's article on "Diseases of the Digestive Tract" is really a monograph, embodying the new physiology of digestion as it has been established by the discoveries made by Pawlow, Futterer and others, whose investigations have so completely revolutionized our knowledge of the digestive function. The bacteriology of dysentery and the diarrheas of infants; the subject of intestinal parasites and the recent advances in the diagnosis and treatment of diseases of the liver and gall-bladder are fully considered. Diseases of the pancreas have of late been exciting much attention, and Dr. Hemmeter has devoted considerable space to their discussion.

In the article on "Surgery," by Dr. J. C. Bloodgood, of Johns Hopkins, there will be found a particularly interesting discussion of the entire field of anesthesia, both local and general, considered not only from the standpoint of the surgeon-specialist, but also from that of the general practitioner. Dr. Bloodgood's chapter includes, in addition to the subjects above referred to, an exhaustive review of all advances in the treatment of fractures and dislocations, amputations and orthopedics. It is illustrated by a splendid series of engravings in the text, and by six full-page plates in black and colors. The subject of the surgical infections in their various aspects is thoroughly canvassed. A very valuable part of Dr. Bloodgood's contribution is that devoted to tumors, benign and malignant; all the recent advances in their surgical treatment being presented, and the X-ray therapy of tumors is discussed at length.

Dr. Bellfield's contribution on "Genito-Urinary Diseases" covers the entire field in a most practical manner. Of special interest to the general practitioner will be found that part which deals with tuberculosis and other infections of the genito-urinary

tract. The article on the "Prostate," especially on the treatment of hypertrophy of that organ, is of the highest interest.

In dealing with "Diseases of the Kidneys," Dr. John Rose Bradford, of University College, London, presents an interesting discussion of the blood changes in chronic renal disease, and particular attention may be called to his able consideration of the surgical treatment of chronic Bright's disease. An excellent *resume* of the advances in our knowledge of albuminuria and indicuria is included in the article.

Since the startling announcement made by Koch in regard to the difference between human and bovine tuberculosis, scientists the world over have been engaged in an earnest endeavor to ascertain the actual facts. This subject constitutes one of the most interesting of the topics discussed by Dr. Harrington, of Harvard, in the section on "Hygiene." The conveyance of typhoid and other infectious diseases is another topic upon which Dr. Harrington presents the most recent views.

The concluding section of the issue is taken up with the "Practical Therapeutic Referendum," by Dr. Landis. It is a thorough, up-to-date index of the progress in therapeutics, treating not only of the drugs recently introduced to the profession but also dealing fully with the physiological action and clinical uses of older remedies. Thus the continued use of acetone in enteric is noted; the various antitoxins receive due attention; the coal-tar products are referred to; vioform, the new neutral powder, and isarol, the new substitute for ichthylol, are described, and on the other hand it takes two pages to describe the newer preparations of as old a stand-by as quinine. Dr. Landis greatly increases the practical value of this excellent chapter by introducing a number of prescriptions, showing the best vehicles for the administration of the less known drugs.

In dealing with the contents of "Progressive Medicine," it is impossible to mention more than a few of the subjects of special interest; each contributor, however, will be found to cover most thoroughly the entire field which is assigned to him. The different sections are not mere compilations, but are complete discussions of the various topics under consideration. Because of their standing as consultants and teachers, the contributors to "Progressive Medicine" are peculiarly cognizant of the points possessing interest for the medical profession. It is this knowledge and its practical application which has resulted in the wonderful success of the work.

The publishers announce that, with the new year, the annual subscription price of "Progressive Medicine" will be reduced

from \$10 to \$6, and that for convenience in carriage, it will divest itself of the heavy cloth binding. The volumes will each contain 300 pages, abundantly illustrated, and the work will continue to be issued under the same editorial management and with the same brilliant corps of contributors which have made it the indispensable assistant to the active, busy practitioner. The series of these volumes forms annually a practical treatise covering the entire domain of medicine and surgery.

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*The Etiology, Pathology, Diagnosis and Treatment of Tumors.*

By A. HAMILTON LEVINGS, M.D., Professor of the Principles and Practice of Surgery and Clinical Surgery in the Wisconsin College of Physicians and Surgeons, Surgeon to St. Joseph's, Milwaukee County and Mount Sinai Hospitals, Consulting Surgeon to Johnson's Emergency Hospital and to the Milwaukee County Hospitals for Acute and Chronic Insane. Profusely illustrated. Chicago: Cleveland Press. Canadian Agents: Chandler and Massey Company, Limited, Yonge Street, Toronto.

We fully believe that the author of this most excellent work on tumors has given the profession of medicine a work of clear conception as regards the causation, origin, structure, diagnosis and treatment of tumors. That the subject is an important one, all will agree; a subject which cannot possibly be overestimated. They have been classified according to their histological structure, and in the preparation of the work it will be found that the author has contributed greatly to this subject of medicine by the many beautiful and original illustrations, which may be put down as constituting a marked and distinguishing feature. These illustrations number 259, and must be seen to be appreciated. We believe that the medical faculty will give Dr. Levings' work a warm welcome. The publishers, The Cleveland Press, are to be congratulated in presenting this work to the medical profession. As regards the mechanical side of the book, they have done their part exceedingly well. The heavy cow-hide binding makes a splendid binding, calculated to preserve the volume. We understand it is the intention of the Cleveland Press to get out a fine class of books. If this is a sample, we look forward to seeing good things in the future. The members of the Canadian profession may secure a copy of this work through Mr. A. P. Watts, of the Chandler and Massey Company, Limited, Yonge Street, Toronto.

*Nose and Throat Work for the General Practitioner.* By GEORGE L. RICHARDS, M.D., Fellow American Laryngological, Rhinological and Otological Society; Fellow American Otological Society; Associate Editor "Annals of Otology, Laryngology and Rhinology"; Otologist and Laryngologist, Fall River Union Hospital, Fall River, Mass. Price, \$2. New York: The International Journal of Surgery Co. Canadian Agents: Chandler & Massey Company, Limited, Yonge Street Toronto.

This book derives especial importance from the fact that the diseases described therein constitute so large a share of the physician's daily routine of practice. It has been the author's aim to teach the practitioner how to diagnose these cases and how to treat them successfully and according to modern methods. With this object in view every effort has been made to describe the treatment in such detail as to leave no point obscure, and to simplify the technics as much as possible so as to avoid the necessity of an elaborate and expensive armamentarium. No space is occupied with theory, and the information given is based for the most part upon the author's own extensive clinical experience in diseases of the nose and throat. For the sake of completeness a number of conditions are discussed which properly belong to the specialist, but with these few exceptions the diseases described are such as can be treated by the general practitioner. A noteworthy feature of this work is the large number and excellence of the illustrations.

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*Progressive Medicine.* Vol. III. September, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. Landis, M.D. Diseases of the Thorax and its Viscera, including the Heart, Lungs and Blood-vessels, Dermatology and Syphilis, Diseases of the Nervous System, Obstetrics. Philadelphia and New York: Lea Brothers and Company.

The foregoing denotes what is comprehended in the present volume. The work is invaluable to the progressive physician who wishes to keep himself well to the front in modern medicine and its advances. There are four contributors to this volume: William Ewart, M.D., F.R.C.P., William S. Gottheil, M.D., William G. Spiller, M.D., and Richard C. Norris. Each handles

his part in a meritorious manner, and all the literature on the different subjects has been apparently examined in order that everything new and important may be properly set forth. We have commended this work so frequently to our readers, that any further encomiums might be considered superfluous. We know of no better work to keep one thoroughly posted upon current medical literature.

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*A Text-Book of Obstetrics.* Fourth Edition. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in University of Pennsylvania. Handsome octavo, 900 pages, with 746 illustrations, 39 of them in colors. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Cloth, \$5.00 net; Sheep or Half-Morocco, \$6.00 net. Toronto: J. A. Carveth & Co.

In revising his work for this the fourth edition, the author has spared no pains to make the book reflect the latest knowledge on the subject. He has even described and illustrated the method of using the "Neumann-Ehrenfest Kliseometer." His perfect familiarity and extensive experience with diseases of women is shown in the careful and minute manner in which he describes the various methods of treatment. As most all the diseases of women are the consequence of complications of childbirth, their preventive treatment at least is in the hands of the obstetrician, and the physician in general practice must be equally well informed in both branches of gynecology. The specialist in obstetrics must be an expert in the surgical treatment of all diseases of women. Even the specialist who confines his work entirely to this treatment, must at least have served a long apprenticeship in practical obstetrics, and have mastered its science to be adequately prepared for his work. From the glimpse we have obtained of Dr. Hirst's knowledge of diseases of women, we wait anxiously for his new work on that subject. In this present work every page has been altered and bettered in some way. More attention has been given than in the previous editions to the diseases of the genital organs associated with or following childbirth, and this, we think, is an excellent improvement. Many of the old illustrations have been replaced by better ones, and there have been added besides a number entirely new. The work treats the subject from a clinical standpoint, the author ever keeping in mind that the aim of all medical literature is to cure.

*Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition.* By PROF. DR. CARL VON NOORDEN, Physician-in-Chief to the City Hospital, Frankfurt. Authorized American edition. Translated under the direction of Broadman Reed, M.D., Professor of Diseases of the Gastro-Intestinal Tract, Hygiene and Climatology, Department of Medicine, Temple College; Physician to the Samaritan Hospital, Philadelphia, etc. Part IV: The Acid Auto-intoxications, by Prof. Dr. Carl Von Noorden and Dr. Mohr. New York: E. B. Treat & Company.

The chronicle of the researches of Professor Noorden into the derangements of metabolism which result in an over-production of acid, will be found to concern the clinician as well as the subjects dealt with in the three previous volumes of this very interesting series, published concurrently in Berlin and New York. That there are numerous forms of self-poisoning is now admitted, and herein will be found an able exposition of that gravest of all forms, acid production. The publishers are to be congratulated on the American production of these monographs.

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*The Four Epochs of Woman's Life. Maidenhood, Marriage, Maternity, Menopause.* By ANNA M. GALBRAITH, M.D., Author of "Hygiene and Physical Culture for Women": Fellow of the New York Academy of Medicine, etc. With an Introductory Note by JOHN H. MUSSER, M.D., Professor of Clinical Medicine, University of Pennsylvania. 12mo volume of 247 pages. Cloth, \$1.50 net. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Canadian Agents: J. A. Carveth & Co., Limited. 413 Parliament Street, Toronto.

This work, written for the instruction of the laity on subjects of which every woman should have a thorough knowledge, is indeed a timely and excellent one. The fact that a second edition has been demanded in such a short time is sufficient proof that women have at last awakened to a sense of the penalties they have paid for their ignorance of those laws of nature which govern the epochs of their lives. The language used is clear and comprehensive, yet, withal, modest, and the meaning easily grasped even by those unfamiliar with medical subjects. As a further aid a comprehensive glossary of medical terms has been appended.

In this new edition the author has made some excellent ad-

ditions, viz.: A section on "The Hygiene of Puberty"; one on "Hemorrhage at the Menopause a Significant Symptom of Cancer"; and one on "The Hygiene of the Menopause." These sections make the work the very best on the subject we have seen, and physicians will be doing a real service by recommending it to their patients.

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*Lessons on the Eye.* For the Use of Undergraduate Students.

By FRANK L. HENDERSON, M.D., Ophthalmic Surgeon to St. Mary's Infirmary, and the Christian Orphans' Home; Consulting Oculist to the St. Louis City Hospital, to the Wabash Railway and the Terminal Railway Association, etc., etc. Third edition. Philadelphia: P. Blakiston's Son & Company.

This is a first-class students' manual on diseases of the eye, and will be found of no little value to those in the practice of general medicine. The work is entirely practical, lays no claim to the comprehension of the entire science of ophthalmology, and is designed to impart and convey only useful knowledge. This it does well. The spelling of some of the words are according to the rules of the American Association for the Advancement of Science, as oxid, sulfate, quinin, etc.

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*Text-Book of Anatomy.* Edited by D. J. CUNNINGHAM, F.R.S., M.D. (Edin. et Dublin), D.Sc., LL.D. (Glasg. et St. And.), D.C.L. (Oxon.), Professor of Anatomy and Chirurgery, Trinity College, Dublin. Illustrated with 824 wood engravings from original drawings, many printed in colors. New York: William Wood & Company. Canadian Agents: Chandler & Massey Limited, Toronto.

Anatomy is a subject in medical literature fortunate in that there are many high-class books relating thereto. The present work under review, in its very first edition, takes at once a prominent stand in the front rank. Cunningham has been well known on this side of the Atlantic for many years. His dissector has stood well the test of time; and in most dissecting rooms it is the sole companion of the man with the scalpel. The production of a general work by the same author was, therefore, looked forward to with keen interest, and it is quite safe to say

that no one has been disappointed. The book has many new and unique features, not to say many illustrations, some old, many new. These latter are of the very highest order of excellence, and enhance very much the value of the work. We are rather taken with the manner in which the action of muscles is tabulated. This new feature will, no doubt, be very acceptable to students, who are all too prone to neglect the study of the function of muscles.

There is also a well-arranged and well-written section on surface and surgical anatomy. We would have liked to have seen Cunningham fall into line in the description of the shaft of the fibula, as others have done recently, so that there might be uniformity in description. The shaft is generally four-sided, and so can be readier described and remembered by students. The practising physician needs a review of his anatomy from time to time, and there should be more of it. While the student will find it a most valuable companion to his dissector, the physician in practice will find it fresh, up-to-date, and just as near perfection as any anatomy published. It has been a pleasure to us to examine its pages. A like pleasure is awaiting any one who applies to Mr. A. P. Watts, of Chandler & Massey Company, Limited, Toronto, for a copy. We endorse and recommend it most favorably.

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*Cancer and Pre-Cancerous Changes: Their Origin and Treatment.* By G. H. FINK, M.R.C.S., L.S.A. (Lond.), Major Indian Medical Service (retired). London: H. K. Lewis, 136 Gower Street, W.C.

This brochure opens with a general survey of cancer, which is probably the most formidable disease at the present day, and then proceeds to discuss at extended length the various theories of cancer. There are twenty-six chapters in the book, the entire number being well written and full of valuable information on the subject.

Desiring to make a practical, useful journal for the General Practitioner,  
the Editors respectfully solicit Clinical Reports from subscribers and others.

# Dominion Medical Monthly

And Ontario Medical Journal

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No. 1.

## GETTING INTO THE MEDICAL PROFESSION.

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There are in Canada to-day something like 2,000 medical students eager and anxious to get into the medical profession. They are devoting hours, months, and years of study qualifying for admission. Thousands of dollars are being spent by each, which if spent or invested in some good business would reap for them far more of a monetary consideration. This takes into account no value of the time required to fit them for medical practice. If the amounts spent for books, board, fees, etc., were added to the value of a young man's working capability at twenty-one years of age, the total would approximate \$5,000, which would be a very fair item with which to embark upon a business career. And yet, after this outlay, the number who actually get into the profession of medicine heart and soul, are in great

minority. This has particular reference to the hundreds, not to say thousands, if we brought into the scope of the reference the United States, who are not even members of a medical organization or society of any description, be it of county, city, provincial, or national standing. They are "apparently in," but in reality "out." How is this? Wherein lies the reason for this unfortunate condition which prevails to such a wide extent? And yet there are not lacking signs that the profession is awakening in this respect, as evidenced in the steady growth at the annual meetings of the larger associations. According to the investigations of the Secretary of the American Medical Association, there are about 25,000 of the profession of the United States, which sums up to about 150,000, who participate in medical society work, who are actual members of these societies. Here, in Canada, the largest body of medical men that can be got together, does not commence to equal the medical population of either of the two largest cities, Montreal and Toronto, a number for all Canada which, in many instances, does not equal the attendance at State societies. Does the reason or the cause of this lack of spirit and interest in the advancement of the medical profession as a body lie at the fountain head, or is it due to too many seeking to attain to the ranks of medicine as a means of enjoying an easy life, or earning a very good livelihood? The total lack of teaching medical ethics and business methods at our medical colleges no doubt has a good deal to do with the prevailing attitude of many who are "not in" the profession, as they should be in it, and who are from five to ten years in practice before they make up their minds to become a member of either a provincial or of our national medical association. It is generally found that those engaged in medical college work are active members of all the leading medical societies, and, being such, are in a strong position to educate those under their charge to the advantages both to themselves individually and to the profession as a whole, of their becoming, as soon as they have been graduated, active participants in medical society work. Professors, lecturers, and clinicians should, therefore, lose no opportunity in promoting industriously the idea amongst medical students that when they once get into the medical profession, they stay in and do not immediately drop out of sight, of sound, and of hearing.

## THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

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Founded and endorsed by the Canadian Medical Association, patronized by many of the leading practitioners of Canada, and upheld and sanctioned by the medical press of the country, the Canadian Medical Protective Association ought to be a successful and thriving institution. Officered by men who are keenly alive to its worth to the medical faculty, who are industriously seeking to bring home to the minds of the medical men of Canada the need of just such an organization to bind our profession together in standing off malicious attacks upon the integrity of our characters and professional attainments, and in many instances the welfare and happiness of our households, it is, indeed, a great surprise to know that those of us who are already thus bonded together, can scarcely attain to a membership of three hundred. Already this Association, since its organization in 1901, has done a great amount of good in successfully protecting and defending several of its members in suits for alleged malpractice. It has paid out in defending these suits something like \$1,026 since its inception, defraying the legal costs to defendants; and it must be very gratifying to the officers that, "in every instance that we have undertaken to defend one of our members, we have succeeded." Surely an organization which is admittedly doing such good work—and most everyone in conversation will admit that he should be a member—ought to demand at the hands of the medical profession of Canada something more than a fractional support of our faculty. These are the things that are of the most vital importance to us as a professional body, the object of sharks and the prey of unmitigated scoundrels. Their discussion in gatherings of the medical fraternity are mostly hurried over, in the precipitate desire many have, who believe that the stereotyped programme of papers is all and everything of the good that can come out of us as a body. A whole half day would not be too much to allot at the annual meetings of the parent medical organization of Canada for listening to the annual report of this meritorious association, for its discussion, and for the recording of suggestions looking towards its perfection. The day is coming when medical gatherings will partake more of matters of this character, and that day should not be very far deferred. Now is the time; delay is dangerous.

**REPORTING DEATHS IN NEW BRUNSWICK.**

The following clipping from the *St. John Telegraph*, Wednesday, Jan. 6th, 1904, is worthy of record:

*To the Editor of The Telegraph:*

SIR,—Some few weeks ago a number of physicians were summoned before the police magistrate for not reporting births that had occurred in their practice. Believing the Act under which it was attempted to prosecute them to be unjust and an unwarrantable interference with their liberty, and especially with the confidential relationship which they hold with their patients, they determined to oppose the prosecutions and fight the matter through. The following letter from Dr. L. A. Currey, who was retained as their counsel, gives the result of the action taken:

“In the Police Court of the City of St. John.

“The King, on the information of John B. Jones, *v.* Murray MacLaren and certain other medical practitioners in the city of St. John.

“DEAR SIR,—I hereby beg to notify you that the information in the above matter, and all other informations against medical practitioners in the City of St. John, laid under and by virtue of the Vital Statistics Act of the Legislature of the Province of New Brunswick have been withdrawn by the prosecutor and are at an end, and that it is not necessary for you to further attend the hearing of the above or any of the other informations either personally or by counsel.

“The action of the prosecution in the withdrawal of said information was not brought about by any request or otherwise on the part of your counsel, but was the voluntary act of the prosecutor, and for reasons best known to himself or those who represent him.

“I attended at the return of the information, and at all the subsequent adjournments, either personally or by my partner, and was on each and every occasion of said adjournment ready to proceed with the defence on the grounds outlined by me to your society at the meeting held some weeks ago in your rooms.

“Should future action be taken at any time against your honorable body, I consider the same grounds of objection would be equally as available and tenable as in the present case, had they proceeded to full hearing and disposal thereof.

“I may add that the further I have carried my legal investi-

gation and research into the validity of said Acts, the more I am convinced of their unconstitutionality, and that the sole and exclusive right to legislate with reference to vital and all other statistical matter belongs not to the local legislature, but to the Parliament of Canada.

"L. A. CURREY,

"*Counsel for Medical Practitioners.*

"December 16th, 1903.

"To J. W. DANIEL, M.D., *Chairman.*"

From this it appears that Dr. Currey believes the whole Act to be *ultra vires* the Provincial Legislature, and, as the law officers of the Government have withdrawn the prosecution, it would appear that they must agree with that opinion.

As the physicians have been criticized in some quarters for their refusal to carry out this Act, the undersigned were appointed as a committee to give to the press some of their reasons for doing so, in order that the public may have a clearer idea of the matter than they have at present.

When this Act was first passed it did not compel physicians to report, although they were mentioned, and it was unnecessary for us to take action. Last winter, however, Mr. John B. Jones obtained an amendment compelling physicians to report to him with a number of details, within five days of its occurrence, every birth attended by them, and under a penalty not exceeding \$20 or imprisonment in the county jail.

Some physicians did make returns and had to undergo the humiliation of finding a number of their patients in the police court to answer a charge of neglecting to register births, and the charge was to be proved on the evidence of the physician!

In other words, the physician was made a spy and informer on his patients, and that under a heavy penalty. From the physicians' standpoint such an Act is most abhorrent, destroying at once the confidential relationship existing between physicians and patient, and making them (the physicians) unwilling perjurers in breaking the oath they took on graduation to preserve inviolate all information coming to them through the necessary confidences of their patients. This is our great objection. We also object to being made statistical officers without our knowledge or consent and without remuneration.

That Mr. John B. Jones should be able to get an Act passed by the Legislature exploiting the gratuitous services of the whole

medical profession of the county to collect statistics and, incidentally, to assist him materially in making a living, without others being consulted in any way, is a circumstance that requires a fuller explanation than has yet been given.

We believe that no class of citizens in the community is more law-abiding and more honorable in its dealings than the physicians; no other class of persons has ever been compelled to do professional work for the public for nothing, and penalized for neglect; we are tired of legislation of this kind and think it is time it was stopped.

The objections taken to the Act by our counsel, Dr. L. A. Currey, may be summarized as follows:

1. The Act under which these prosecutions were brought are *ultra vires* to provincial legislatures.

2. The gratuitous duty imposed on medical practitioners by said Act is repugnant to natural justice, and is not of such a public nature as authorizes the legislature to impose the same.

3. The above Act requires (a) medical practitioners to become informants on their patients, and renders the latter liable to a penalty; (b) to violate their professional oaths in making a public record of facts which are often of a delicate and confidential character; (c) to perform gratuitous services for which another receives remuneration.

Yours truly,

THOMAS WALKER, M.D.  
J. W. DANIEL, M.D.

St. John, N.B., January 2nd, 1904.

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### News Items

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DR. C. M. LANG has been appointed associate coroner in and for the County of Grey.

DR. J. MARTY, of New Hamburg, has been appointed coroner for the County of Waterloo.

DR. A. F. REYNAR of Palgrave, has been appointed associate coroner for the County of Peel.

DR. A. BROWN, of Motherwell, Ont., has gone to Markdale where he has purchased a practice.

THE Canadian Medical Protective Association should have every physician in Canada on its roll of membership.

MUCH smallpox prevails in Cape Breton, and fears are entertained that it may invade Sydney.

DR. LEFEVRE, Vancouver, B.C., has arrived home after a two months' trip to the Old Country.

PATRONIZE those commercial houses who patronize the medical journals. Their standing is thus unquestioned.

DR. S. H. WESTMAN, of the Anatomy Department of Toronto University, has gone to England for a year's study.

DR. A. C. HUNTER, of Goderich, has been appointed Surgeon Captain in connection with the 33rd Huron regiment.

TYPHOID fever is epidemic in the suburbs of Montreal. To date, 10th of January, upwards of six hundred cases have occurred.

THE advertisements in this issue should be read carefully. We are satisfied that our subscribers will be able to find many things of value.

DR. CARLOS MACDONALD, New York, has been in British Columbia giving expert evidence in the now famous Hopper *v.* Dunsmuir will case.

THE Ontario Medical Association will meet this year in Toronto under the presidency of Dr. J. F. W. Ross, on the 14th, 15th, and 16th of June.

THE deaths in Montreal during 1903 numbered 6,941 as against 6,275 for the previous year. This gives a rate of 24.22 per 1,000 of the population.

A DENTAL course will be established at McGill University, under the supervision of the Medical Faculty. It will extend over four years and nine months.

DR. L. J. LEMIEUX, Montreal, has recently returned from Paris, and will make experiments in the Notre Dame Hospital, Montreal, with Marmoreck's serum for tuberculosis.

MR. H. L. PEILER, Managing Director of the Lacto-Globulin Company, Limited, Montreal, was in Toronto on business in connection with his firm during the week ending January 10th.

THE Sanitarium By-law in Toronto was carried on election day by a vote standing as follows: For, 4,071; against, 3,882. It will provide for raising \$50,000 for the purpose of a municipal sanitarium for consumptives.

DR. T. BEDFORD RICHARDSON, Toronto, has removed from 10 Carlton Street to 128 Bloor Street West, having recently completed the purchase of that property, which he has had fitted up in modern and handsome style.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.—It costs only \$2.50 per annum to be a member of this most worthy organization and be protected for a year in case of actions for alleged malpractice. Why should you not be a member?

MR. E. G. SWIFT, for many years manager of the Walkerville laboratories of Parke, Davis & Co., has been appointed General Manager of that firm at Detroit, succeeding the late Mr. W. M. Warren, and being succeeded by Mr. R. H. Revell.

THE Civic Treasury Board of St. John, N.B., has made a grant of \$1,000 to the local branch of the Victorian Order of Nurses. There have been two nurses on their staff during the past year, and these made a total of 3,000 visits. Another nurse will be added to the staff.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.—The Toronto Clinical Society, on motion of Dr. George A. Peters, seconded by Dr. D. Campbell Meyers, at its last regular meeting, endorsed the Canadian Medical Protective Association, and urged all its fellows, as well as practitioners all over Canada, to immediately become members of this most important organization.

THE Montreal League for the Prevention of Tuberculosis is issuing an appeal for funds to enable it to carry on the war against tuberculosis in that city. The Government of the Province of Quebec has granted the League a tract of land on Trembling Mountain, where they will erect a sanitarium; and it is their intention also to establish free consulting rooms in the city.

DR. W. F. LANGRILL, Hamilton, Ont., who for several years has been Medical Health Officer of that city, was recently appointed Medical Superintendent of the Hamilton General Hospital, in succession to Dr. McLaren, but declined. The Governors of the Hamilton Hospital will co-operate with the Toronto General Hospital in securing a larger grant for the hospitals of Ontario from the local government.

## Correspondence

### A METHOD OF SECURING GREATER UNIFORMITY IN PROFESSIONAL CHARGES.

*To the Editor of DOMINION MEDICAL MONTHLY.*

We all recognize the lack of uniformity in our system of professional charges, and no doubt would welcome with appreciation a system that would facilitate the adjustment of the amount of remuneration in each particular service rendered, providing it fulfilled the two cardinal conditions which underlie our financial dealings, viz., adequate remuneration for services rendered, and a just consideration of the financial condition of the patient.

I have endeavored to give a solution of this problem in terms of the table herewith presented, and in this connection I suggest that the remuneration for professional services be stated in definite amounts, and not in the sliding scale that we now use, and that the amount charged be estimated upon the basis that a single man without any one dependent upon his income, and with an income of one hundred dollars per month can reasonably be expected to pay full amount or 100 per cent. That for each additional individual dependent upon the monthly income, a 10 per cent. reduction be made, and for each ten dollars decrease in the monthly income 10 per cent. be made, and also for each ten dollars per month that the income rises above one hundred dollars per month an additional member of the family is included in the full rate.

This schedule is intended to apply only to those in moderate circumstances. When the income reaches two hundred a month, the matter of remuneration is better left wholly to the discretion of the physician, but the table can be extended to cover all incomes. The principles embodied in this system we have all recognized, and have adopted more or less in our daily practice, regulating our charges according therewith; but with such a system as I have outlined we could secure a greater degree of uniformity than with our present method.

The question of the monthly income, in many cases, would present a difficulty, only an approximation would be possible. Then there is the ever-varying personal factor to consider, a matter that cannot be calculated in terms of tables or mathematics.

Notice that this table is ruled both vertically and horizontally. In the vertical column to the left is the amounts of monthly incomes, and in each column to the right is the percentage of

Monthly Income.	Number Dependent upon Income.								
	1	2	3	4	5	6	7	8	9
150	100	100	100	100	100	100	90	80	70
140	100	100	100	100	100	90	80	70	60
130	100	100	100	100	90	80	70	60	50
120	100	100	100	90	80	70	60	50	40
110	100	100	90	80	70	60	50	40	30
100	100	90	80	70	60	50	40	30	20
90	90	80	70	60	50	40	30	20	10
80	80	70	60	50	40	30	20	10	
70	70	60	50	40	30	20	10		
60	60	50	40	30	20	10			
50	50	40	30	20	10				
40	40	30	20	10					
30	30	20	10						
20	20	10							
10	10								

reduction of income, according to the number dependent upon the income.

For example, a man consults us requiring appendectomy, the

schedule rate being say \$250.00, he has an income of \$60.00 per month, and dependent upon him are his wife, three children, and an aged mother, that is, six in all. He then, by reference to the table, is taxed 40 per cent of the schedule rate, or \$100.00.

Such a table of reference would tend to impress the patient that we consider both his responsibilities, as well as his finances, and would at times be of great assistance to us in stating to the patient the cost of services, a full understanding of which is so essential to the proper relation of patient and physician.

ERNEST A. HALL,

Vancouver, B.C.

## Special Selection

### REMARKS ON GLYCO-THYMOLINE.

BY W. R. D. BLACKWOOD, M.D., PHILA., PA.

For many years this preparation has been one of my mainstays in diseases of the mucous membranes, and it has held its place despite the trials of many other agents warranted to supplant it by the advocates who decried Glyco Thymoline when I spoke of its virtues. Space is now getting too valuable to waste with long detailed descriptions of separate cases, and, anyhow, I never did write in that manner—I think general remarks about agents is the better way, and we need this more than stories of symptoms and temperatures, with daily alterations. No class of maladies is more troublesome than disorders of the mucous membranes, and none more difficult to eradicate thoroughly, and we have been put to our wit's end many times for remedial agents in such cases. The local treatment of catarrhs is frequently disappointing, and none more so than that prevalent one—post-nasal catarrh. Unless we can get an alterative condition established little good is done, and nothing has been of greater service to me than Glyco-Thymoline, locally and internally, in several hundreds of long-standing and severe cases of this intractable and common affliction. I have come to regard this preparation as a standard and almost routine remedy. I seldom care for a post-nasal trouble without prescribing it at

the onset, and if I don't it is not long before it comes into use. It is just alkaline enough; just so as to the dialysis—the action locally with exactly the right amount of fluid excretion through the diseased membrane—just enough astringent without drying the parts; and just the right thing in the direct line of reparative work; it sets up tissue building soon after the membrane gets somewhere near its right shape. Many things are employed in catarrh, but I firmly believe that if I was confined to one agent only, that would be Glyco-Thymoline. For years I used the so-called antiseptic tablets of boric acid, salt, glycerine, etc., and with good results, but for a long time past this is thrown aside and the Glyco-Thymoline takes its place. I use it in about half-strength with a "Birmingham" douche, and from twice to four times daily. With this, in bad cases, I give it internally, adding to it, or giving separately, mercuric bichloride, and if done separately the menstruum is compound syrup of stillingia. In presumed syphilitic persons I always do this.

In gastritis, chronic enteritis, vaginitis, gonorrhea, and in recurring attacks of what too many physicians deem appendicitis, I use this agent freely, and always with good results. As a local application to foul ulcers, and especially to hemorrhoids, I think this preparation is very good. In the nasty leg ulcers which now and then defy all remedies, Glyco-Thymoline does wonders—it can't do harm any time, and I am almost persuaded to give it in all instances. In bronchitis and asthma it is fine; in spasmodic croup it fills the bill nicely; it does well in venereal disorders locally, and in balanitis it stops the trouble at once.

*Prize Competition, See Pages 112 and xxxiv.*

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## Original Articles

### PULMONARY EMBOLISM.

BY R. EDEN WALKER, M.D., NEW WESTMINSTER, B.C.

Pulmonary embolism, or more properly speaking, occlusion of the pulmonary artery or one of its main branches, is a condition which fortunately does not often present itself to our notice. When it does occur its onset is so sudden and, in the majority of cases, its termination so disastrous, that its very name creates a feeling of dread: sudden death, which is the rule in these cases, occurring in the course of any illness, more particularly in obstetrical practice, is appalling. It carries with it a feeling of horror, and no physician, however great his reputation may be, can escape the criticisms which invariably follow, even although the accident is entirely beyond his control; it is only by a thorough familiarity with the cause, and by being able to explain how impossible it is to foresee or avert the fatal termination, that he can in some degree hope to modify these adverse criticisms.

The cases of which I shall briefly give the history all occurred in obstetrical practice, so that in this paper I shall confine my remarks chiefly to this condition as a consequence or complication of labor, although practically the pathological condition is the same whether arising after labor or in the course of disease, accident, or surgical interference.

Case 1.—Mrs. A., aged 35, a delicate and anemic woman, pregnant for the fourth time, was delivered after a comparatively

short labor, on April 18th, 1900; the delivery was followed by severe post-partum hemorrhage, due to relaxed condition of uterus; this, however, was checked after a few minutes. The patient, anemic before her confinement, was more so now than ever, but gradually recovered without any other symptoms than those due to anemia, and was able to sit up for a short time at the end of the second week. On May 12th, twenty-four days after delivery, while in bed, she was suddenly seized with violent dyspnea, precordial distress, oppression and fear of impending death. She was lying on her back, the window of the room was thrown wide open, and she complained that she could not get air enough, and she was breathing rapidly and laboriously. She also complained of pain over heart and left breast; on examination a soft, blowing murmur could be heard over the pulmonary artery; air freely entered both lungs. Temperature was normal; pulse, 140, feeble. Absolute rest was enjoined, and stimulants and iron administered internally. The dyspnea gradually subsided, except when any attempt at movement was made. The patient's general condition steadily improved, although anemia was still very marked, but hope was entertained of her ultimate recovery, when on May 30th, eighteen days after the first attack, she was suddenly seized with violent dyspnea, and expired within half an hour. The temperature throughout this case was normal, and no symptoms of septic infection or of thrombosis of the veins of the extremities existed at any time.

Case 2.—Mrs. B., aged 44, sixth pregnancy; a strong, robust woman. Head presented in the occipito-posterior position, and was delivered with forceps, after a tedious and difficult labor, on November 11th, 1902. Septic trouble developed on the third day after delivery, temperature rising to 103.2; with appropriate treatment this subsided, and the temperature was normal, and patient convalescent on about the twenty-fifth day after delivery; on December 19th, thirty-six days after delivery, she was suddenly seized with intense pain in left breast, with great difficulty of respiration. I saw her within an hour, when she was lying with head elevated, as she could breathe best in this position; marked dyspnea, severe pain in precordial region; pulse, 130; respiration, 47; temperature, 101.4. On examination, no heart murmur could be heard, and air freely entered both lungs. The patient had a persistent, dry cough, which greatly aggravated the attacks of dyspnea. The dyspnea continued at intervals for about ten days, being always aggravated by movement or coughing. For several days, the pulse remained about 120, and respiration

between 30 and 40 per minute. On December 25th, six days after onset of attack, temperature had fallen to 98.2, pulse to 116, respiration 35, and on January 4th, fifteen days after onset, temperature, 98.2; pulse, 85; respiration, 25. The patient made an uninterrupted recovery, and is now in good health. The treatment adopted was free stimulation, whiskey and strychnine and rest. On December 21st, two days after onset of attack of dyspnea, patient developed thrombosis of left femoral veins, with all the usual symptoms accompanying it. This subsided as time progressed.

Case 3.—This case occurred in the practice of another physician, who is now deceased, but as I was called in when the attack of embolism occurred, I have included it with the others. Mrs. M., aged 24, primipara; labor normal, slight laceration of perineum; two or three days after delivery had slight chill, and developed tenderness in right side, probably cellulitis; this passed off, and she was apparently convalescent and up on twelfth day. While attending to some trivial household duties on the sixteenth day after confinement, she suddenly complained of great pain over heart, and difficulty of breathing. She was placed in bed, but rapidly became unconscious, and died in about fifteen minutes.

These three cases, while presenting a clinical picture similar in their general outline, are symptomatic of a pathological condition, widely different in its etiology. When considering the cause of these attacks, we are confronted with the question, is the occlusion due to embolism of the pulmonary artery derived from a thrombosis in some of the systemic veins, or may it be due to primary thrombosis, originating in the pulmonary artery itself? My own opinion, based on what I have observed, and from the literature upon the subject, is that while embolism is the common cause, there are a certain number of cases which cannot be accounted for in any other way than that of primary local thrombosis of the pulmonary artery. Case No. 1 must, I think, be considered as a case of primary thrombosis in the pulmonary artery itself. In this case anemia was present in a marked degree, and all writers are agreed that chlorosis is a strong predisposing cause of thrombosis; the absence throughout of any rise in temperature, or other symptom of sepsis, the absence of any symptom that would indicate thrombosis of the pelvic veins or veins of the lower extremities or elsewhere, from which embolism could be derived, are strong negative reasons why this should be considered a case of primary thrombosis of the pulmonary artery. Welch, in an exhaustive treatise on this

subject of thrombosis and embolism says: "Although thrombosis is not a common complication of chlorosis, it is sufficiently frequent to indicate a special tendency to its occurrence in this disease." Playfair strongly advocates the theory that primary thrombosis of the pulmonary artery may occur, and in support of this view, he points out that the anatomical peculiarity of the pulmonary artery is a predisposing cause; also in puerperal cases that the blood in the later months of pregnancy is peculiarly rich in fibrin, and thus predisposed to the formation of coagula. Welch, in the treatise already referred to, says: "I also believe that primary thrombosis of the pulmonary artery is more frequent than is usually represented in the text-books," and Dr. Newton Pitt says that "thrombosis of the pulmonary artery is far from being rare, possibly occurring more frequently than any other vein or artery in the body." Many times only a small branch is occluded without any apparent symptom; it is only when a large-sized vessel is plugged that symptoms occur. Sir Jos. Fayerer is also a strong advocate of the thrombotic theory. He cites sixteen cases of death due to thrombosis in all of which post-mortems were held, and lays particular stress on the depraved condition of blood in malarial and splenic cachexia as a predisposing cause. Emboli in puerperal cases are generally derived from thrombosis in the veins of the lower extremities, or from the veins of the pelvis immediately surrounding the uterus; that thrombi in these veins following labor is practically always of septic origin is I think an established fact, so that in dealing with such a case of pulmonary embolism, which is not immediately fatal, we have to bear in mind that the resulting infarct is infective, and will be followed by a train of symptoms in addition to those of embolism, more or less severe in proportion to the size of the infarct and the virulence of the infection.

Case No. 2 is an example of such a condition. Septic thrombosis no doubt existed in the pelvic veins, and from it the embolism was derived. The apparent simultaneous appearance of thrombosis in the veins of the left leg, with the pulmonary embolism was, I think, due to an extension of the septic thrombi from the iliac to the femoral veins. Playfair, in his "System of Midwifery," cites a somewhat similar case, and advances the theory that the thrombosis in the pulmonary artery and the femoral vein both occurred simultaneously and independently, as a result of a peculiar condition of blood favoring coagulation. I cannot help thinking, however, that sepsis plays the principal part in cases with such a history.

Case No. 3 was also, I believe, a case of embolism, the emboli being derived from the pelvic veins, and no doubt due to septic infection. The time at which obstruction to the pulmonary artery is liable to occur is of some interest. Playfair says that when the accident occurs before the nineteenth day, it is generally thrombosis, when after that time emboli. Dr. Fordyce, in the "Encyclopedia Medica," says that embolism seldom occurs before the end of the second week. I have been able to collect the history of fifteen cases occurring after confinement; of these seven are reported to be due to thrombosis, and occurred one, seven, nine, ten, eleven, twelve and fourteen days after delivery. Eight are reported as due to embolism and occurred three-quarters of an hour, four, four, six, seven, fourteen, twenty-four and seventy days after delivery. Of my own cases, the case of thrombosis occurred twenty-four days after delivery, and those of embolism sixteen and thirty-six days after. A question of some interest arising out of the cases I have narrated is the formation of an infarct, a necessary sequence of obstruction of the pulmonary artery or its branches. In both my cases which survived the first attack, no physical signs could be detected in the lungs. Case No. 1 gave absolutely no evidence either by physical examination or subjective symptoms. In case No. 2, considerable pain was complained of in the left side posteriorly, cough already referred to was a troublesome symptom, but there was no expectoration, and only a small amount of frothy mucus. A physical examination gave negative results. The temperature, which ran between 100 and 102 for a week or more, might have been caused by the accompanying phlebitis in the vein of the left leg. The collateral circulation in the lungs through the numerous pulmonary capillaries, and with the bronchial mediastinal arteries, is so abundant, that in occlusion of the medium-sized or smaller vessels, the vitality of the parts is sustained if otherwise healthy. Infarction is most likely to occur in cases complicated by mitral insufficiency or fatty heart, where chronic congestion of the lungs exists. Welch says that the majority of cases of thrombosis and embolism of the pulmonary artery present no evidence of infarct. Newton Pitt places infarct following occlusion of pulmonary artery as occurring in less than one-third of the cases, but Prof. Anfrecht, in "Nœthnagel System of Medicine," says that, in his opinion, infarction follows most cases of embolism of medium-sized arteries.

*Treatment.*—I should like to add just a few words as to treatment. In those cases where the main artery, or a large branch,

has been occluded, the physician seldom has an opportunity of attempting any form of treatment, death generally occurring before he can be summoned, and indeed, if he does arrive before the fatal termination, he can do little to avert it. In many cases, especially puerperal ones, much can be done in the way of prophylaxis. In cases where thrombosis of the veins of the extremities exists, it would seem almost superfluous to emphasize the necessity of rest and the avoidance of massage or friction to the affected limb; should thrombosis of the pelvic veins be suspected in the course of an obstetrical or gynecological case, prolonged rest in bed should be enforced. Should chlorosis complicate the case, as it generally does, the free administration of iron is indicated. Cases which must always give the medical man considerable anxiety are those in which an extreme degree of chlorosis exists, and which are complicated by the puerperal condition or by recent operation. I think in such cases following the puerperal period, that rest in bed, much beyond the time ordinarily prescribed, should be insisted upon. When an attack has occurred, and the patient survives the immediate onset, absolute rest in bed in the recumbent, or semi-recumbent, position is essentially necessary; often the slightest movement, such as raising the hand to the mouth, aggravates the dyspnea: free stimulation with whiskey and strychnine, the latter preferably by hypodermic injection, and liquid diet, are the principal indications; should much restlessness and pain exist, morphine (gr. 1-4) is a safe and reliable remedy.

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### ABDOMINAL CONTUSIONS.

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By A. E. BOLTON, M.D., VICTORIA, B.C.

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By this term I mean injuries to the abdominal wall and contents by some force applied to the surface of the body without resulting in a penetrating wound of the abdomen. These injuries are not infrequent in industrial centres. A couple of decades ago the more severe of such cases were diagnosed as grave internal injuries, and left to nature, with a very large percentage of deaths. At the present stage of surgical science, while we cannot always accurately diagnose the exact lesion, we should be able to recognize symptoms that indicate intra-abdominal exploration,

and it is important that this should be done as early as possible in the history of each case.

My object in bringing up this subject for discussion is that we, as general practitioners, may have our memories refreshed upon general points of diagnosis, and perhaps learn new lessons from each other's experience: I will first draw your attention to some general considerations stated by recent authorities, and then rehearse brief notes of some cases occurring under my own observation, and that of fellow practitioners in this city during the past year.

*Mechanical Considerations.*—An expected blow upon the abdomen will be received upon rigidly contracted muscles, and the viscera protected, while one unexpected will find the muscles relaxed, and the force will be expended upon the internal organs. The stomach or bowel will be more readily ruptured if distended with food or gas.

*Symptoms.*—(1) External ecchymosis: The amount of visible bruise of the skin does not necessarily bear any relation to the severity of the internal lesion. This will be demonstrated in some of the cases to be described, where little or no external signs accompanied the most grave internal injuries. (2) Shock: Older writers give this as the chief symptom of injuries to the abdominal viscera. The literature and personal experience from which the material for this paper is drawn show that shock is the most unreliable of symptoms, as some of the most serious injuries are followed by no appreciable shock. (3) Temperature tells us very little, especially in the early hours when diagnosis is most difficult and yet most important. There is a fall of temperature corresponding to the amount and duration of shock, and a rise with reaction. A secondary fall below normal indicates serious trouble. (4) Pulse may not be altered in rate or force when shock is absent, although the injury may be severe. Acceleration after reaction is a bad indication. (5) Respiration is quiet and shallow in presence of shock. Rapid thoracic breathing is an important early sign in abdominal injury. (6) Vomiting immediately after accident is unimportant, later it has graver significance. (7) Thirst in reaction indicates internal hemorrhage. (8) Dulness in the lateral regions indicates hemorrhage or rupture of the bowel or pre-existent cyst. (9) Hematuria indicates generally injury to the kidney; catheterization should not be omitted, and the failure to find urine in the bladder indicates rupture of that viscus. (10) Tympany progressive and continuing a day or more after injury is a symptom of increasing

gravity. (11) Pain, without rigidity, may be from contusion of skin and muscle, but when associated with rigidity, and especially when deep and radiating, indicates serious trouble. (12) Tenderness, with pain, is important, and may assist in localizing the injury. (13) Rigidity is the most constant and most reliable of the early symptoms. There is an increasing board-like rigidity that is characteristic of severe intra-abdominal injury. (14) Abdominal facies once seen can be better recognized by recollection than by description. It may be absent in severe injury, but when present is pathognomonic of serious lesion.

Case 1.—Mill hand, age 40, struck by a piece of timber flung from a circular saw. The only external sign of injury was a small bruise a little below and to the left of the navel. Abdominal muscles were rigid, pulse full and strong and rate 80. Was given a stimulant, and was asked to report in three hours. Next seen twelve hours later; temperature, 100; pulse, 72; pain and rigidity increasing. Had him removed at once to Jubilee Hospital. Three hours later, temperature, 99.2; pulse, 68. Consultation with three confreres, with as many different opinions, at last resulted in decision in favor of immediate operation. Conditions found were: blood and intestinal contents free within the abdomen, the ileum was completely severed in two places within six inches of each other, directly over the promontory of the sacrum. The adjacent descending colon was also ruptured.

Case 2.—Miss B., aged 45, native of Iceland, injured by falling over a loose plank in the sidewalk. Early symptoms were pain, but no shock. She walked two blocks to her home. Seen by my colleague, Dr. Ernest Hall eighteen hours later, who sent her at once to the hospital. Symptoms were: pulse, 110; temperature, 101.5; moderate pain and tenderness over all parts of the abdomen with fluctuation. Immediate operation revealed the abdomen filled with the contents of a ruptured hydatid cyst, which occupied the left lobe of the liver.

Case 3.—Male, aged 20, seen with Dr. Duncan. Injured by several sacks of flour falling upon him, throwing his abdomen against the edge of a barrel. The only external injury was a slight ecchymosis at the navel. Very little shock, and very little pain at first. When I saw him four hours after the injury, there was marked rigidity, with pain and tenderness to the right of the umbilicus, intense thirst but no vomiting, breathing was shallow and rapid, thoracic in type, complained of intense pain in the suprascapular region, caused, in my opinion, by the extreme effort of the accessory muscles of respiration in that region.

Operation by Dr. Davie, at St. Joseph's Hospital, a few hours later, showed the abdomen filled with blood from a tear in the mesentery of the ileum. The omentum was also torn from the transverse colon with other minor injuries.

Cases 4 and 5, occurring in the practice of Dr. Frank Hall, were both young girls, one injured by the kick of a horse, and the other by a bicycle accident. One proved to be a case of rupture of the liver and also of the stomach, the other of the liver alone. The former presenting very little shock, while the latter was in profound shock when first seen.

Case 6 (reported by Dr. G. D. Hall).—Laborer, aged 52; at work excavating one hour after eating a hearty breakfast, tunneling under a bank some fourteen feet high. A large block of clay, weighing between 1,500 and 2,000 pounds, loosened and struck him, throwing him on his right side, which position he was found in, being partially covered with the clay. He suffered severely from the shock. Radial pulse not perceptible; conscious; no vomiting. He was at once removed to the hospital and placed on the table, being immediately transfused. Examination disclosed a double fracture of the pelvis. Upon passing a catheter, no urine was found, but a little blood adhered to the end of the instrument upon withdrawal. Upon opening the abdomen, I found a rupture about three-quarters of an inch in length in the posterior part of the bladder, and the ileum completely severed in two places within a length of three inches, the rent passing a short distance into the mesentery; the rectum was also torn.

In conclusion, allow me to suggest that in every case of injury of the abdomen, the practitioner should remember that the gravest results often follow apparently the most trivial causes, and that all abdominal injuries be considered serious until subsequent results show that such apprehension is without warrant.

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#### DEDUCTIONS FROM THE STUDY OF PELVIC DISEASES IN THE FEMALE INSANE.

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BY ERNEST A. HALL, M.D., VANCOUVER, B.C.

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It is not my purpose to give a *resume* of the work which has been done with regard to the investigation into the causes of mental diseases, especially with reference to abnormal conditions

of the pelvic organs; nor to endeavor to attempt any solution of the problem of the co-relation of the physical with the psychic, but to give you a few deductions, which have been the product of several years of careful study of pelvic diseases as causative of abnormal mentality.

At the last meeting of this society, the able superintendent of our Provincial Hospital for the Insane gave us a masterly address upon the relation of general practitioners to the diagnosis and treatment of the insane, given from the standpoint of the specialist. My view-point is that of a general practitioner, and I shall deal with this matter as it has appeared to me in private practice.

It is but necessary to call your attention to the alarming increase of insanity upon this continent, to the ever-increasing burden that is thus entailed upon the State, and the shadow which this condition casts upon many of our best families, to arouse your interest in any measure, or measures, whose object is the amelioration, or curtailment, of this condition.

We have in this causation and treatment of insanity a problem second in importance only to that of the control of cancer and tuberculosis.

As an indication of the turning of the attention of the profession to this matter, many of the modern text books upon gynecology contain a chapter upon this subject; and as an indication of the necessity of a careful examination of all cases presenting abnormality, I make the surprising statement that, of the 111 examinations which I have made of females with well marked mental diseases, I found decided pathological conditions in 101 (90 per cent.). Several other investigators have found a similar percentage. I refer to Dr. Tyler, of Denver, who reports that less than 10 per cent. have normal pelvic organs. Dr. Hobbs, late of London Asylum, found 80 per cent. diseased. Reports from other asylums, where careful examinations were made, give about the same percentages.

Without enlarging upon this part of the subject, or going further into statistics and reports, all of which go to show that pelvic disease in the insane should receive appropriate treatment, as in the sane, and that mental unsoundness cannot be an excuse for the neglect of treatment of any physical lesion—matters upon which we all agree—I shall now proceed to make statements which we cannot be expected to accept unanimously. For the convenience of discussion, I shall state my deductions numeri-

cally—accepting Dr. Clouston's statement that insanity is the product of heredity and strain.

1. Given a condition of pelvic or abdominal disease in an insane woman of not less than forty-five years of age, whose physical condition necessitates section, providing the necessary manipulation does not necessarily render her sterile, *it is* the duty of the surgeon, with the consent of husband or friends, to render her incapable of reproduction.

2. Given a history of recovery from one or more attacks of insanity, in a married woman of less than forty-five years of age, *we are justified*, with the consent of the husband, or friends, in rendering her sterile by the smallest necessary manipulation.

3. Given a first attack of insanity in a woman of good heredity, if, after an examination by the best skill obtainable, without finding any physical lesion, *it is justifiable*, considering the surprises many of us have met with upon opening the abdomen, and also in consideration of the pathological conditions within the abdomen and pelvis that cannot be determined by any method of external examination, also considering the fact that we are dealing with a condition that may doom the patient to a death to all that we hold dear in life, and with a method of examination which has a risk scarcely more than that of the anesthetic, *we are justified*, I repeat, in opening the abdomen for the purpose of diagnosis.

4. Considering the somatic basis of insanity, or that mental disease is but the psychic sum of physical abnormality, and since it has been shown that the recovery rate is greater in recent cases, before the habits of vicious cortical metabolism have become established, we should endeavor to concentrate our efforts upon the treatment of recent cases, and endeavor to discover and remove the under-lying physical lesion. In order to facilitate this treatment, I suggest that in connection with each of our city hospitals a special ward be erected, or if necessary, and possibly better, at the present time, an additional hospital be established, specially adapted for the reception and care of recent cases of insanity, with Dr. Manchester as consulting physician; that they remain there for from one to three months under the care of their family physician, associated preferably with a nervous specialist, and a surgeon (which latter term now includes gynecologist), that if after receiving treatment, they do not recover, they then be passed into the provincial hospital. It would be folly to detain such cases as idiocy, senile dementia, or general paresis.

This suggestion is not with the idea of casting any reflection upon the management of our provincial hospital. It is as good as the present system can make it, and the superintendent one of the ablest in the Dominion. But I do say that no two men can do justice to a colony of invalids, such as our province has to support; and, further, that the associations of an asylum are not those in which you would care to see your wife, mother, or daughter placed except as a last resort; nor are such associations calculated to restore the weakened bodies or recuperate exhausted neurons. Not until we had exhausted all other means at our disposal should we desire such an environment.

Another point we must not lose sight of is the odium (the result of ages of ignorance, I admit) which attaches to detention in a provincial hospital, which, while it may be ridiculed in such a discussion as this, is sufficient to blast the prospects of any man or woman who holds a position of trust, or prominence. Also with such detention hospitals, a radical change could be made in our methods of commitment, which have so frequently been criticized, all of which would, of course, require an amendment to the Lunacy Act.

I may say that nervous wards are being added to many of the Eastern hospitals, in which certain controllable types of insanity are being treated.

As an indication of the inadequacy of the present equipment to meet the requirements of the case, I shall refer to the report of the Provincial Hospital for the Insane for the year 1902, in which Dr. Manchester makes the following statement:

#### "TREATMENT."

"The methods of treatment pursued during the past year have not differed from those employed in the year before, as outlined in last report, and while they have been as successful as usual, and results compare favorably with those obtained in other years, yet I would not be doing my duty if I allowed you to think that our methods are as advanced as they should be. We lack many facilities, even primary ones, for carrying on the most modern and scientific treatment of the insane, and narrowly escape ranking as a mere house of detention.

"If you were to remove from this institution all the patients' bedrooms, dining-rooms, lavatories and closets, together with the kitchen and heating plant, officers and attendants' quarters and the newly-erected shops, what would be left? Almost nothing.

The apartments enumerated are what you would find in connection with any home; wherein, then, does the hospital consist? True, we possess an up-to-date operating room as the sole mark of a hospital, but even this is so badly set as to its immediate surroundings as to greatly curtail its usefulness. But where are the patients' examining rooms, the laboratories with their instruments for the examination of blood, urine and sputum, the hydro-therapeutic and the electro-therapeutic appliances which are proving so useful in many places; where are the walks for an airing and the gymnasium for exercise during the long winter months, and the campus for outdoor recreation in summer? The truth is they are all lacking, and largely for the reason that they were not considered necessary here in the past."

Again, with reference to self-supporting patients, of which there are not a few in the province, having had six under my own care within the past year, Dr. Manchester says:

#### "PAYING PATIENTS.

"There have never been any special arrangements made in this Hospital to cater to the needs of a self-maintaining class of patients, and the result has been that all such have simply had to take their places amongst the 'free patients,' sharing the same rooms with them and eating at the same tables the same simple bill of fare. This is certainly contrary to the commonest sense of justice, and while it may not be the intention of the Government to encourage the committal of this class of patient to the institution, they should do either one of two things, namely, refuse to accept the money which these patients are able and willing to pay, or give them some better consideration in return for it. There happens to be no private institution for the care of insane in this Province, and, until there is, a portion of these buildings could be laid apart for them and suitably furnished and tended."

#### THE GRAND JURY'S FINDING.

With reference to the establishment of such an institution, I made a suggestion to the Board of Directors of the Vancouver City Hospital, that such accommodation be afforded in the new city hospital, and that the idea should be embodied in the new plans. I am not aware that anything was done in the matter.

As to the constituency for this proposed hospital, I have at present three cases under my care that should be in such an institution. I have refused to take charge of others. These

patients are all being supported liberally by their friends. I can see no reason why the hospital cannot be self-supporting until such time as provision be made for the reception of poor patients. With an organization upon a liberal basis, without partiality, the co-operation of the profession might be reasonably expected.

It is apparent to the grand jury that the institution is overcrowded in some sections. Taking the whole accommodation and comparing it with the number of patients in the institution we find only ten male beds vacant, and accommodation for only one more female.

As to the immediate future, a lady of intelligence and means has made the offer to begin this work in her residence. She has had not a little experience in nursing, and will manage the hospital, employing trained nurses and undertaking all financial obligations. For the present only paying cases could be taken.

In closing, I suggest also the following resolution:

*Resolved*, That inasmuch as the increase of the number of insane dependent upon our province demands additional accommodation to be provided, and since our Provincial Hospital for the Insane is insufficiently equipped for the modern treatment of disease, that the British Columbia Medical Society recommend to the Provincial Legislature the establishing of a "Hospital for Nervous Diseases," for the reception and treatment of recent cases of insanity, and that the Lunacy Act be so amended as to give the presiding magistrate the power to commit suitable cases thereto.

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## EXTRA UTERINE PREGNANCY

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BY F. W. HALL, M.D., VICTORIA, B.C.

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*Mr. President and Gentlemen*,—It is just two days ago since I was requested to read a paper on ectopic gestation, and I must therefore ask your indulgence for the brevity of this paper, and the small amount of knowledge imparted by it. You see it was not down on the list of papers to be read at this meeting, and will just come in as a sort of appendix, not a vermiciform appendix, but on the same principle; that you would be just as well off without it.

When an impregnated ovum becomes fixed, and begins to de-

velop outside of the uterine cavity ectopic gestation, or extra-uterine pregnancy is established, the varieties being tubal, ovarian and abdominal.

*Etiology.*—The point at which the spermatozoa meet and impregnate the ovum is not known. The ease with which the spermatozoa pass from the vagina through a virgin os uteri into the uterus, and the occasional cases in which they travel through an almost imperforate hymen, make it reasonable to suppose that they may pass as readily up the uterus into the fallopian tube, and even into the abdominal cavity. Pathological or abnormal conditions of the tube, however, form the most important factor in the causation of ectopic gestation. Chief among these conditions are congenital deviations, from the normal type, such as exaggerated convolutions, diverticula, sagging and attachments by adhesions, resulting in the distortion of the tube, pressure from adjoining organs; thickening of tubal walls, either congenital or acquired, desquamative salpingitis, growths either in the canal or the walls, etc.

*Pathology.*—With the establishment of pregnancy in the tube the uterus begins to enlarge, and up to the fifth month is usually about one-third smaller than intra-uterine pregnancy of the same age. Rupture of a tubal pregnancy, with death of the ovum, checks uterine growth, and involution follows. If the ovum does not die the uterus may continue to enlarge, but to a lesser degree.

*The Decidua.*—The formation of the decidua is one of the most notable changes in the uterus in ectopic gestation. It resembles the decidua vera of normal pregnancy, and is thrown off in one complete cast about the time of primary tubal rupture, and this event is generally accompanied by metrorrhagia. The membrane is cast off, even if the ovum remain alive.

The decidua is one-eighth to one-quarter inch in thickness and rough on its uterine and smooth upon its inner surface, and shows no trace of decidua reflexa, nor of decidua serotina.

*Diagnosis.*—The principal features upon which a diagnosis rests are: Arrested menstruation, generally but two or three days over time. A sudden attack of pain, of a cramp-like character in the lower abdomen, located more especially to the affected side, associated at times with an intense pain in the rectum of a lancinating character. The blood passed is usually dark, gummy in appearance, and its flow is generally more or less constant. The paroxysms of pain continue for from one-half to two hours, and are at intervals of from one to four days, or more. Bi-manual examination is painful, especially when you palpate the tumor on

either side of the uterus. The uterus is changed in size and consistency, and is dislocated according to position and size of the blood-tumor. If the patient has not nursed a baby for more than a year, or has not previously been pregnant, the presence of cholestrem is an important symptom, especially when taken together with other symptoms.

Rupture is diagnosed by the suddenness of the attack, and the excruciating pain followed by more or less syncope, and if it is possible to obtain a history from a relative, the data already given may aid in corroborating the suspected diagnosis.

The differential diagnosis is at times most difficult, and in some cases impossible without an exploratory incision.

1. The condition most likely to mislead you would be the rupture of a large ovarian hematoma, especially if there is a continuous oozing from the torn surface.

2. Subacute gonorrhreal pyosalpinx: The symptoms resemble those of tubal rupture in every particular, so that one may be easily lead into making a wrong diagnosis; but you will generally find the suppurative change affecting both tubes simultaneously, while tubal pregnancy is very seldom present in both tubes. A small vaginal incision into Douglas's sac would soon clear the diagnosis, but as either condition requires surgical treatment to bring about the well being of the patient I do not see as it matters much.

*Treatment.*—We should look upon intra-uterine pregnancy as one would regard a beginning malignant neoplasm, which should be removed as soon as a diagnosis has been made.

I have dismissed the treatments of: (1) Aspiration of liquor amnii; (2) infection of morphea into the tubal sac; (3) treatment by means of electricity as being not proven, although there is evidence of these means being successful. I recognize but two methods, the conservative and the surgical treatment. The conservative consists briefly in keeping your patient absolutely at rest, with a nurse constantly in attendance, an ice-coil applied to the abdomen, morphia to keep her comfortable and a liquid diet.

*The Surgical*.—The abdominal incision should be rapidly made, and be of sufficient length to permit one to work as rapidly as possible. The blood oftentimes wells up out of the abdomen as from a fountain. No attention should be paid to this. The pelvis must be reached at once, and the affected tube or tubes be brought up at once and tied. Then proceed to have warm saline solution poured into the abdomen by an assistant, while the

operator removes all clots of blood from the pelvis and lower abdomen. The abdominal cavity is then left filled with saline solution and the abdomen closed in layers.

I have had thirteen cases of tubal extra-uterine pregnancy, one of which died before operation, and a post mortem revealed pregnancy in tubes of about six weeks' duration; the rupture had taken place close up to left cornu of uterus.

Two I diagnosed before rupture, and ten some hours after rupture. Eleven recovered, and one died eighteen hours after operation of shock from loss of blood and operation. In all cases after rupture I have an assistant at the time I am preparing my patient to transfuse from thirty to forty ounces of saline solution into the cephalic or median basilic veins. I always leave the abdominal cavity filled with hot saline solution, and have saline into the bowels every two hours for the first twenty-four or forty-eight hours and 1-30 gr. strychnine, by hypodermic injection, every four hours, for first three or four days, and open the bowel on the third day.

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## PERINEAL PROSTATECTOMY.

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It is not my intention in the present paper to describe the various operations in vogue for removing enlarged prostates, nor to enter at any length into the symptoms or general treatment. I merely wish to describe and invite discussion upon the perineal operation, which has become so popular in Eastern surgical centres during the past few years, and to report a case I operated upon by that method.

In this, as in all operations for the removal of the prostate, the patient must be thoroughly prepared. By thoroughly, I do not refer to the ordinary routine preparation of resting, dieting, bathing, purging and antisepsis, which extends over two or three days, and is common to all major operations. This is all required, but much more. Cases with enlarged prostates are usually advanced in years, and their malady chronic in character. The bladder is frequently infected, and occasionally a severe cyst-

itis is present. Very often the infection has found its way through the ureters to the kidneys, which also partake of the infective process. The patient's health is usually far below par, and, as a rule, they are unfit to endure any serious surgical operation. In prostatectomy, the preparation should extend over two or three weeks if necessary, until the general health is raised to the maximum, the cystitis much reduced, and the urine clear and aseptic, preliminary perineal drainage being resorted to if necessary.

On entering the hospital, they should be put upon a tonic and a nutritious diet which is unirritating to the kidneys and bladder. Abundance of water should be given—two quarts a day at least—five grains of urotropin four times a day; the bladder washed with warm boracic solution twice daily, and the catheter used at regular intervals; the skin thoroughly cleansed and massaged daily; four or five electric light baths should be given to promote thorough elimination of toxins through the sudoriferous glands and to produce a healthy condition of the skin.

The patient having been thoroughly prepared and anesthetized, the operation is proceeded with as follows: The patient is placed in the lithotomy position, a sound is introduced up to the prostate, and held firmly by an assistant. The index finger of left hand is introduced into rectum. With sound in urethra and finger in rectum as guides, it is comparatively easy to extend incision through the superficial structures to capsule of enlarged gland. There are four methods of making external incisions advocated:

1. The median perineal incision, which consists of a straight perpendicular section in the median line.
2. Zuckerkandl's semilunar incision, which extends between tuberosities of ischia with convexity forward.
3. Kocher's triangular incision, which consists of two slightly curved lines drawn from tuberosities of the ischium to a point in median line opposite membranous urethra.
4. Senn's Y-incision, which consists of an inverted capital Y, and is made by drawing two straight lines from lower end of median incision to points midway between rectum and tuberosity of the ischium.

I believe Senn's inverted Y-incision exposes the prostate to the best advantage, and will be particularly appreciated in obese subjects.

The skin, subcutaneous fascia, muscles, and membranes are incised with the scalpel. The deeper dissection, which consists

of separating rectum from, and laying bare, the prostate, should be done with fingers or blunt instrument. All bleeding points must be carefully secured and tied, special attention being paid to hemorrhoidal plexus. Pads of gauze, wrung out of hot water, will be found of service in stopping the general oozing. A clear field is imperative to perform this operation properly, besides these patients will not endure the loss of much blood. The gland must be completely exposed before attempting its enucleation. The lower flap should be held down by a large vaginal speculum, and the sides of incision held back by long, narrow retractors. One of the lateral lobes of prostate is now seized by a bullet forceps, and pulled forcibly downwards, while a horizontal incision is made through capsule of other lobe. The lobe is then shelled out of its capsule by aid of the finger, except at its junction with the middle lobe. The other lobe is separated in a similar manner. The two lateral lobes are now grasped by the forceps, and pulled downwards, while the central lobe is clipped off, together with a portion of prostatic urethra. In case adhesions prevent enucleation, you will have to resort to moulillement. The finger should now be inserted into the bladder, and a thorough examination made for calculi. If any are discovered, they should be removed, enlarging the incision backwards if necessary. A small rubber tube is now inserted into the bladder for drainage, and brought out at one end of incision, where it is stitched to skin. A rubber catheter is passed through penis into bladder, and held in place by a stitch. This serves to mould urethra, and aids in washing out the bladder. The bladder and urethra should be stitched up closely around drainage tube.

Iodoform gauze is packed well against neck of bladder around the tube, and allowed to drain externally. The gauze packing serves to drain incision, and prevents urine escaping except through drainage tube. The fascia, muscles and skin are now sewn up with silk-worm gut, and plenty of dressings applied.

With the catheter in urethra and drainage tube entering by perineum, we have an excellent chance to irrigate the bladder. This should be done several times a day until healing is complete. Gauze should be removed in from twenty-four to forty-eight hours after operation, and drainage tube in about six days. After the eighth day, the catheter should be removed about every second day, cleansed and reinserted. This should be continued for three weeks. Five grains of urotropin should be given three times a day, until parts are in a healthy condition. The patient should be made to sit up in from two to three days after opera-

tion, and be out of bed in a week or ten days. The incision will generally heal by first intention, and be completely closed in from three to five weeks.

Bottini's method and the suprapubic operation have many strenuous advocates, and up until the last few years the latter was considered the safest and easiest method, but the perineal route has now had a fairly extended trial, and seems likely to survive the test of time. From an anatomical standpoint it is to be preferred. The perineal method gives dependent drainage, which is the ideal treatment for prostatic complication, and the bladder can be thoroughly irrigated with the minimum of disturbance to patient.

#### REPORT OF CASE.

Patient, aged 70, had urinary trouble for past fifteen years. The chief symptoms were frequency of micturition; more marked during the night although quite frequent during the day. Urine was passed with little force, and was accompanied with some pain at neck of bladder. Urine contained abundance of pus and mucus, but no blood. For five months previous to operation, was compelled to rise every half hour to relieve his bladder. This disturbance of sleep caused a marked failure in health. Examination of prostate per rectum showed it to be moderately and uniformly enlarged. Passing of catheter caused severe pain, and the patient would rather submit to an operation than resort to catheter life.

He was put under treatment for twelve days before attempting an operation. During that time he was encouraged to drink large quantities of water, received four electric light baths, and had skin massaged after each. Five grains of urotropin were given four times a day, bowels regulated, and bladder washed three times a day with boracic solution. At the end of this time we considered him in a good condition for an operation.

After patient was anesthetized, a sound was passed and stone discovered. A sound had been passed twice previously, once by myself and once by another practitioner, but without finding the stone. The operation was performed as above described. Zuckerkandl's incision being employed. After removing prostate, an incision was made through neck of bladder posteriorly, and stone removed.

Patient made good recovery. There was no rise of temperature. Incision was completely healed in five weeks. Slight tenderness existed in perineum for a few weeks after leaving hos-

pital, but this has completely disappeared. He now rises about once during the night to relieve himself, but this is more due to habit than necessity. He says a sudden step down or jolt will sometimes give him a desire to urinate, but otherwise his urinary apparatus is in perfect condition.

## Selected Article

### THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT IN CHILDREN.

BY DR. N. FILATOV.

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(Translation from RUSSIAN by G. B. Hassir, M.D., Chicago.)

Acute inflammations of the mucous membrane of the fauces, the so-called sore throats, occur in childhood very often; but, since children younger than five years usually do not complain of painful deglutition, it is very easy to overlook a sore throat, provided the physician does not stick to the rule to examine the throat in every diseased child, especially in febrile conditions. The strict fulfilment of this rule is the chief condition of a correct diagnosis of throat diseases in children. In many cases, especially in nurslings, inspection alone is insufficient; one must also feel the throat with the finger, by which it is easy to discover a retro-pharyngeal abscess.

Sore throat always manifests itself by reddening and swelling of the mucous membrane of the tonsils, and soft palate; sometimes these symptoms settle the matter, while in other cases whitish or yellowish islets, or patches, and diffuse coating appear on the vel surface.

*Diseases of the Throat Characterized by Reddening of the Mucous Membrane of the Tonsils and Soft Palate.*—Here must be included first of all simple or catarrhal sore throat—angina catarrhalis. This disease appears either primarily, under the influence of exposure to cold, in entirely healthy children, or secondarily during exacerbations of a chronic catarrh of the throat, especially in scrofulous children with hypertrophied tonsils, or in acute infectious diseases, namely, in influenza, scarlet fever and measles.

*Genuine catarrhal sore throat.* angina catarrhalis rheumatica, occurs quite seldom, more seldom than, for instance, different spotted sore throats. This disease is characterized by a considerable fever (in older children by painful deglutition) and redness, with swelling of the mucous membrane of the tonsils and soft palate. In two or three days everything is over. If similar attacks take place repeatedly in a child during autumn and winter, and if the tonsils are enlarged or there are some other signs of chronic catarrh of the throat, as dilatation of the vessels and swelling of the glands of the posterior walls of the pharynx whose mucous membrane is usually dry, then we have to deal with exacerbation of the chronic catarrh, the fever being in such cases insignificant and sometimes even entirely absent.

Catarrhal sore throat as an accompanying symptom of an infectious disease, differs from a primary sore throat by the characteristic signs of the latter: in *la grippe* snuffles is always present and often also cough; in scarlet fever a characteristic eruption on the skin appears at the end of the first 20 hours; in measles, however, the diagnosis may be helped out by the mucous membrane of the fauces remaining still normal on the first day of the fever, and on the second or third day there appears not a diffuse redness, but a spotted one. Spots of the size of a pea appear in limited number on the soft and partly on the hard palate, on the normal, i.e., not reddened mucous membrane: the diffuse hyperemia occurring later on, for instance, after twenty-four hours, when separate spots disappear. They are easier to be seen on the other parts of the mouth, especially on the mucous membrane of the lips and cheeks.

In scarlet fever, from the very first, the redness of the fauces is also not of a diffuse character, but consists of very small points. The spots are much smaller than the patches in measles, are situated closely together, and sometimes one may notice that they are produced by petechia. If the scarlatinal eruption of the soft palate be not accompanied by punctate hemorrhages it very soon becomes converted into diffuse redness which to some extent is characteristic, because in the beginning it occupies the centre of the soft palate and is limited by very abrupt edges (map-like redness), while in simple catarrhal sore throat the tonsils become affected more often, and the redness never differs decidedly from the normal mucous membrane. After one or two days the specific character of the scarlatinal catarrhal sore throat disappears, the redness becoming diffuse and spreading over the tonsils and posterior wall of the pharynx.

*Diseases of the Throat Manifested by Formation on the Tonsils of Whitish-Yellow Islets.—Follicular Sore Throat—angina follicularis.*—Inflammation of the follicles results in the appearance on the reddened surface of the tonsils of a considerable number of yellowish, round, slightly elevated islets or plugs the size of a pin's head. This angina differs from all other spotted sore throats by the equable size and regular shape of the islets, so that the tonsils look like a "starry sky" (Stromeyer). *The eruption of the islets never extends over the margins of the tonsils.* This disease starts from the very first with high fever, sometimes with vomiting, and may therefore raise suspicion of scarlet fever, the more that the scarlatinal sore throat sometimes develops in the form of a follicular one. The doubt cannot last here longer than twenty-four hours, i.e., until the appearance of the scarlatinal rash.

*Lucunar sore throat*—angina lacunaris—differs from the preceding form by the shape and color of the islets. On the reddened tonsils there are noticeable *irregular, sometimes chinky, figures, of an entirely white color.* Here we do not deal with elevations of the mucous membrane, i.e., not with swollen follicles, but simply with accumulation of catarrhal secretion (mucus, epithelium, fungi) in the hollows, which are so abundant in the tonsils, especially when they are hypertrophied. If the plugs of the lacunæ are of a purely white color, then is the diagnosis easy, because in other punctate sore throats the islets are of a yellowish or grayish tint; if, however, the lacunæ are filled out with mucopurulent secretions and look like islets, then the disease may be thought of as a spotted diphtheria. The latter has two peculiar signs, which could aid the diagnosis immediately, or at least not later than twenty-four hours. The first peculiarity of diphtheria is that the exudation (wherever diphtheria may be—in the throat, intestines, etc.—it is immaterial) occupies first the eminent parts of the mucous membrane (in dysentery, for instance, the tops of the villi), and therefore the diphtheritic process will affect first not the cavity of the tonsillar hollow, as it occurs in lacunar sore throat, but the edges of the latter. To be able to find out minutely the localization of the islets, it is necessary, of course, that the patient could show his throat, but this is often not possible with children. In such a case one must postpone the final decision until the next day and take advantage of the other peculiarity of diphtheria, namely, *its liability to spread over the surface.* If on the next day the islets have become larger and some of them con-

fluent, having formed patches, then it is probable that we have to deal not with a lacunar, but with a diphtheritic, sore throat.

Lacunar sore throat begins and runs with high fever (nearly 40 deg. C.—104 deg. F.) and has a cyclic course, ending with crisis on the third, seldom on the fourth, day. If, however, diphtheria starts with high fever, it always has during the first days a progressive course, assumes a membranous form and never terminates so quickly without the serum treatment. The abortive form of diphtheria which remains until the end as a punctate sore throat may end with recovery in three to four days, but in such a case it remains as a purely local morbid process, running not only without fever, but also without redness of the affected mucous membrane.

Lacunar sore throat is to be considered as an acute infectious disease; this is proven by its cyclic course and appearance as family epidemics; the latter fact makes the diagnosis easier, because the epidemics of diphtheria cannot occur as *slight* sore throats with a typical course.

*Aphthous sore throat* is characterized by formation on the mucous membrane of the soft palate and tonsils of small (the size of the pea) round, superficial, yellowish, *ulcerations* with decidedly hyperemic edges. It is not easy to confound this morbid form with diphtheria or other punctate sore throats, because ulcers are never confined to the tonsils only, but are always accompanied by aphthae in *other parts of the oral mucous membrane*, especially on the tongue, lips and gums.

Aphthous angina, like the aphthous stomatitis, is often accompanied with considerable fever.

*Punctate diphtheria* differs from other punctate sore throats, as already pointed out, by two peculiarities: the liability to extend over the surface, and primary appearance on the eminences of the mucous membrane. Diphtheria, even when membranous, often runs with almost normal temperature, but its punctate variety may be almost excluded if there is considerable fever; if we have to deal with family epidemics, then the diagnosis may be easy, thanks to the fact of typical forms of diphtheria occurring simultaneously with abortive spotted forms.

The appearance of paralysis in the patient after two or three weeks indicate that there was diphtheria, notwithstanding the fact that Gubler long ago described several cases of paralysis very characteristic of diphtheria yet developing after simple sore throats: but his observations were made in pre-bacterio-

logical times. More demonstrative are cases of Bourges, a diphtheritic paralysis after streptococcus angina, and those of Futterer; at any rate, the occurrence of paralysis after non-diphtheritic sore throat is so infrequent that it may be disregarded.

*Diseases of the Throat Accompanied by the Formation of Coats or Membranes.*—In a normal, non-hypertrophied tonsil there may always be seen in its centre quite a large hollow (lacuna) of an oval shape with its longest diameter from above downward. This hollow is sometimes filled in catarrhal or in parenchymatous sore throat with a mucous plug up to the top (as in lacunar angina the small hollows are filled), and then a white spot of the size, for instance, of a small pencil, appears in the centre of the swollen and reddened tonsil. This spot is adherent so firmly that it cannot be removed with a brush and stimulates therefore, as well as by its size, diphtheritic sore throat.

This variety of lacunar sore throat is often accompanied by a considerable swelling of the whole gland—angina parenchymatosa—and often terminates in the formation of an abscess.

The beginning of the disease is manifested by violent fever, usually associated with chills, and in older children by very hindered deglutition.

The white spot, developing on the place of a lacun, has some peculiarities by which it can be differentiated from a diphtheritic coating: (1) It *always occupies the middle of the tonsil*; (2) it always has an *oval form* with the longest diameter from above downwards; (3) its edges are sharply *limited*, the surface, however, reaching the mucous membrane, is seldom elevated; (4) its *color* is, at the start, *intensely white*; (5) the size of the spots remains stationary during several days. On the other hand, the diphtheritic coating is of grayish or yellowish tint, irregular in its contour and grows larger every day, extending not only over the tonsils, but usually also to the soft palate (uvula) and posterior wall of the pharynx.

*Herpetic sore throat*, or herpes of the throat—herpes tonsillarum sive angina herpetica—is characterized by the appearance on the tonsil of a group of thickly crowded vesicles, which very soon rupture and leave in their place an erosion, surrounded by a bright-red ground. The erosion soon becomes covered with a fibrinous membrane which stimulates diphtheria. The eruption of the small vesicles and the formation of the yellowish coating is preceded by a febrile condition of two or three days' duration, sometimes very severe.

The disease terminates in recovery in three or four days.

If the physician did not see the vesicular period he may easily fall into a mistake by accepting the grayish yellow surface of the erosion for the diphtheritic coat, which it resembles in its color and outlines. According to Cadet de Gassicourt, herpes of the pharynx is the most frequent source of error not always avoidable by a single examination; but one can hardly agree that angina herpetica appears as a *frequent* cause of doubt, as this form of malady occurs very seldom.

The differential points from diphtheria consist first of all in the etiological factors (angina herpetica arises from an unknown cause or from an undoubted exposure to cold, diphtheria from infection); then in the durable and high *prodromal* fever, in the origin of the coating from a group of vesicles (if the exudation be removed from the surface of the ulceration by means of cotton, it is often easy to see the scalloped margins of the erosion, alluding to its vesicular origin), in herpes of the lips often accompanying the pharyngeal herpes and in the rapid recovery.

*Membranous or pseudo-diphtheritic (diphtheroid) sore throat pseudo-diphtheritis, s. angina diphtheroidea, s. angina fibrinosa simplex.* —We employ this name in a purely clinical sense and understand by it every kind of inflammation of the mucous membrane occurring with the formation of white or whitish-yellow coats similar to diphtheritic, but independent of the diphtheritic poison, i.e., sore throats in which Löffler's bacillus cannot be found either by microscopical examination of the membranes, or by making cultures on blood serum. That diphtheritic coatings may be produced not only by Löffler's bacillus, but also by other microbes, is undoubtedly now, but which microbes possess this peculiarity we do not know positively; it is certain only that different microbes as, for instance, streptococci, Brison's small coccus, staphylococci, Frankel's pneumo bacillus, etc., can produce such membranes. On the basis of personal observations made during late years on the clinical material of the hospitals for contagious diseases (Moscow) we came to the conclusion that the staphylococcus and streptococcus are the most frequent elements in the pseudo-membranous sore throats and that, for instance, almost all cases of scarlatinal diphtheria may be called streptococcus from the bacteriological point of view. It is also undoubtedly true that streptococcus pseudo-diphtheritic sore throat is sometimes observed without scarlet fever, viz., as a genuine independent dis-

ease. In such cases, to be sure, one cannot deny the possibility of scarlet fever without eruption; but such a proposition may be sometimes denied positively by the fact that the patient immediately after streptococcus pseudo-diphtheritic sore throat becomes infected with scarlet fever. I observed such a case in the infectious departments in December, 1892. Klebs\* observed a whole family epidemic of false diphtheria which was caused by a large micrococcus of the group of monades, so that "*the contagiousness is not to be held as a proof that a given sore throat is not of pseudo-diphtheritic nature.*"

Dr. Bouloche† describes, besides the streptococcus sore throat, three other forms of pseudo-diphtheritic angina due to staphylococcus, pneumococcus and coccus. In his opinion all these infections, including the streptococcus variety, are not contagious, being usually of a short and favorable course. Raukhfuss found in the majority of cases of diphtheritic sore throats Loeffler's bacillus in the stage of involution and accepts such cases as abortive forms of diphtheria, i.e., as diphtheria which developed in a person almost immune to the poison of this disease. According to his observations such patients do not contract this disease when placed among those suffering with diphtheria and do not convey their disease when placed among healthy.‡

Since false diphtheria does not differ very much in its pathologic-anatomical features from the genuine and the etiology, being the most important differential point between these sore throats, remains often obscure, then it is comprehensible that the diagnosis of false diphtheria exhibits in the very first stage of the disease great difficulties, while the timely decision of the question regarding the nature of the disease is very important for the prognosis as well as for the treatment. The main thing is that pseudo-diphtheritic sore throats are held as slight diseases (our observations completely confirm in this regard those of Roux and Yersin, § who never observed here a fatal termination) and it is not necessary to isolate such patients—a point of great urgency in a case of genuine diphtheria.

A prompt and exact diagnosis may be made only through

\*Klebs: Real-Encyclopædia of Prof. Eulenburg, Article "Diphtheria," p. 164.

†Dr. Bouloche: Les angines à fausses membranes. Paris, 1894, pp. 142-153.

‡Report on the twenty-five years' activity of the Children's Hospital of the Prince of Oldenburg, S. Petersburg, 1894, p. 334 (Russian).

§See Vratch., 1890, p. 708 (Russian).

the bacteriological examination (see below), and in case the latter is not applicable then one must content himself by the more or less probable preposition and by clearing up the question through its further course.

Numerous investigations by many authors show that diphtheroid sore throats are far from being rare; from Dr. Polievktow's table\* one can see that out of 1,169 cases, examined in different clinics, pseudo-diphtheritic sore throat (*i.e.*, not caused by Loeffler's bacillus) occurred 151 times, viz., in 15 per cent. In our clinic (Moscow) out of 100 cases, 26 times; Martin met them still more often, namely, of 112 cases, 43 times, *i.e.* in 38.4 per cent. It is self evident that the per cent. of false diphtheritic will be still greater if all cases of sore throat with white spots, which clinically do not look like diphtheria altogether, be referred to this disease.

In many cases pseudo-diphtheria resembles the genuine Loeffler one to such a degree that even the most experienced physician is unable to make a final conclusion without bacterioscopical examination. The practical rule in such cases is therefore the following: if the physician be in such an environment that he cannot resort to a bacteriological examination, he should in all doubtful cases make a subcutaneous injection of antitoxin and isolate the patient.

On the ground of clinical and etiological data one may with greater or less reliability exclude pseudo-diphtheritic sore throat and accept diphtheria, if in a given family there has occurred previously cases of this malady, if the latter runs without or with insignificant fever (but not *vice versa*, because high fever does not exclude diphtheria); if the membranes spread over the edges of the tonsils, for instance, on the soft palate, uvula, nose, larynx. Among the pseudo-diphtheritic sore throats only the scarlatinal variety is very liable to extend far over the borders of the tonsils; all other forms do not affect the soft palate, nor the posterior pharyngeal wall, with, of course, rare exceptions.

Albuminuria is not unfrequently met with in psuedo-diphtheria, but the subsequent paralyses only in diphtheria (Bourges' case, see above.)

*Pseudo-diphtheria may be suspicious*, then, when in a given family there has occurred several cases of a seemingly slight diphtheria, if the membranes be of white color and not firmly attached to the mucous membrane, if the disease began as a

\*Transactions of the Society of Pediatrics in Moscow for the year 1893—946, 113.

severe catarrhal sore throat, *i.e.*, with a high fever associated with intense redness of the fauces and very painful deglutition. It is important to point out that in pseudo diphtheria the membranous exudation almost never extends to the borders of the tonsils, so that the presence of coats on the soft palate, uvula and the posterior pillars points toward a genuine diphtheria (it must be again borne in mind that the scarlatinal false diphtheria is an exception). Finally, the establishment of the diagnosis may be very much helped out by the result of serum treatment. In a recent case (two or three days from the beginning of the disease) of genuine diphtheria, a decided improvement is usually obtained from twelve to twenty-four hours after the injection; in the case, however, of false diphtheria the serum does not influence the further course of the morbid process.

*Diphtheria of the fauces.*—On the basis of pathologico-anatomical data only such a sore throat should be regarded as diphtheria in which a real diphtheritic exudation is developed; when so-called coagulatory necrosis of the mucous membrane is formed; in the period of recovery the necrotic parts should slough off by reactive suppuration and on the spot of diphtheria must remain an ulcer, and a scar after healing of the latter. But from the clinical standpoint something else is known as diphtheria, something that does not lead to necrosis of the mucous membrane, nor to the formation of ulcers or scars, although such processes here may have place. In the diagnosis of diphtheria of the throat the clinicians are guided not by the anatomical changes of the mucous membrane, but by etiological causes, namely : *diphtheria of the throat is an inflammation of its mucous membrane produced by the poison of diphtheria—Löffler's bacillus.* It is immaterial whether the throat be affected by a croupous exudation, or the inflammation be only a catarrhal one; as soon as we find that in a given case the cause of sore throat is Löffler's bacillus we ~~sight~~ regard such morbid process diphtheritic sore throat, and for denoting its particular character we should add the corresponding epithet. Thus we distinguish the catarrhal form of diphtheria, croupous diphtheria and gangrenous or septic diphtheria. These forms are all varieties of the same pathological process—diphtheria which belongs to contagious and epidemic diseases.

Since not only Löffler's bacillus is liable to produce croupous or diphtheria inflammation of the mucous membranes—*i.e.*, membranous exudations, but also other microbes, it is compre-

hensible that the presence of membranous coating alone on some part of the mucous membrane does not prove that we have to deal in any given case with diphtheria; for instance, in a severe bloody diarrhea there occurs diphtheria of the large intestines; but this does not mean that the patient contracted the diphtheritic virus, because such a disease usually is produced by the virus of another affection—namely, dysentery. In the last case also there are met different degrees of inflammation, as in diphtheria of the throat, and therefore there are determined catarrhal, croupous and diphtheritic varieties—in fact the analogy is complete. The same occurs in the throat during scarlet fever, which virus always produces inflammation of the mucous membrane of the fauces; but the degree of this inflammation varies in diverse cases from a simple catarrhal sore throat to a real diphtheritic necrosis.

Thus, according to the stage of development of local and general symptoms we have the spotted form of diphtheria, membranous diphtheria, and the septic variety.

The spotted form of diphtheria, or catarrhal diphtheria, is characterized by the appearance on the mucous membrane of the tonsils of yellowish and grayish islets of the size of a pin's head or larger; fever is low or is absent; the submaxillary glands do not become swollen; the whole disease may end with recovery in three or four days.

Pathologico-anatomically, the spotted form can be called neither diphtheria nor croup, because there is no fibrinous exudation, and we have to deal here merely with a slight catarrh of the mucous membrane, where yellowish gray spots are formed by the islet-like deposit of a mucous exudation in the upper layers of the epithelium (Heubner).

If this form does not go farther, but stops in the period of the formation of spots, then it is easy, of course, for it to be mistaken for a lacunar or some other catarrhal sore throat. The differences have been pointed out above. Since all catarrhal sore throats usually begin with considerable fever, diphtheria alone being an exception, then a normal, or nearly normal, temperature in spotted angina is suspicious of its diphtheritic character; and if at the same time there are, or have been, cases of distinctly developed diphtheria, then the diagnosis is more than probable.

Such forms, indeed, occur very seldom. The diagnosis may be aided by the fact that every day the separate islets grow larger, spreading over the surface, coalescing and form-

ing coats and membranes at first only on the tonsils, and later on the soft palate. We can then say positively, if the margins of the uvula or of the soft palate are involved, that it is not a simple catarrhal sore throat, but diphtheria or scarlet fever; the inspection of the skin decides immediately what.

*Croupous* or membranous form of diphtheria develops either from a spotted one, or appears as such at once, starting in such case like catarrhal sore throat with considerable fever. Inspection of the pharynx on the first day of the disease only shows signs of a severe catarrhal inflammation: bright-red tonsils and soft palate and edematous swelling of these parts with enlargement of the uvula. On the second day the exudation appears on the tonsils, and on the third or fourth day a coating is also seen on the soft palate, the fever at the same time persisting. In the initial stage the membranes are attached firmly and cannot be separated without bleeding, but after several days they slough off.

Such sore throats are always accompanied by swelling of the submaxillary glands and of those of the neck, which, however, never suppurate (differing from scarlatinal sore throat).

*Absence of fever and swelling of the glands does not exclude diphtheria.*

The duration of the croupous variety is from five or six days to two or three weeks, seldom longer.

Slight as diphtheria may appear in a given patient, one never may be sure of a happy termination because of the possibility of an extension of the morbid process into the larynx (croup). Apyretic conditions do not secure from such a disagreeable event, but seem to favor it. The more time that has elapsed since the beginning of the disease, the less likelihood of the larynx becoming involved, thus making the prognosis more favorable. Diphtheria is very liable to extend over the surface during the first five days, so that one may hope that no croup will develop, if the first week has passed away happily.

The younger the child is the less the distance from the tonsils to the larynx, and the quicker one must expect the occurrence of false croup; in children younger than two years diphtheria is especially dangerous, because its extension into the larynx at this age is almost the rule.

Diphtheria may be dangerous of itself, as well as by its action on the general condition of the organism and on the heart activity. Diphtheria is more severe the thicker are the

false membranes, the more surface they occupy and the stronger the odor from the mouth (which in slight cases is entirely absent). The spreading of the diphtheritic process to the posterior pharyngeal wall, and especially on the nasal mucous membrane, is rightly held as an unfavorable omen; of the same value is the considerable swelling of the glands of the neck and edema of the surrounding subcutaneous tissue. The most limited data for the prognosis are derived from the temperature; according to Botkin, high fever in diphtheria permits of a better prognosis than a low temperature.

*Septic, malignant or toxic forms of diphtheria* differ from the preceding by the character of the local appearances, as well as by the general condition of the organism. The considerably enlarged tonsils are coated with a dirty-gray exudation of a very fetid odor; from the nose a sero-purulent, sometimes bloody, liquid discharges; the neck grows swollen, not so much because of infiltration as from the edema of the cellular tissues; then comes collapse, the extremities grow cold, the pulse feeble.

These cases are almost always fatal; if symptoms of adynamia appear from the very first, then the patient seldom survives the first week; some die during the first two or three days.

Diphtheria in its membranous or septic variety is very similar to a *severe scarlatinal sore throat*, which is also characterized by the formation of diphtheritic coats in the fauces. There is, however, not only a clinical, but also an etiological difference. The difference between diphtheria and malignant scarlatinal sore throat may be summed up in the following manner: scarlatinal diphtheria is the result of poisoning of the organism by the scarlatinal virus (according to some authors by the secondary infection due to streptococcus), and, therefore, together with the sore throat, there appears also a scarlatinal eruption; genuine diphtheria, however, arises from infection by the diphtheritic virus which has nothing to do with the skin and thus does not produce any rash. Therefore, if the membranes in the throat be developed simultaneously with a certain rash on the skin, we have to deal with a scarlatinal sore throat or scarlatinal diphtheria; if, however, there is no rash —then, with a common diphtheritic sore throat, or a diphtheria. But this rule, being true of the overwhelming majority of cases, admits also of some exceptions, namely in two directions. First, there occur cases of scarlatinal diphtheria without eruption (this happens usually in grown persons), and, secondly, the patient may contract both viruses: those of

scarlet fever and of diphtheria, and then it may occur that in a scarlatinal patient there will develop simultaneously a genuine bacillary diphtheritic sore throat. In case diphtheria complicates scarlet fever, an exact diagnosis from the inspection alone of the sore throat is impossible. In such an instance bacterioscopic examination is needed.

Scarlatinal diphtheria appears in the patient during the first days of the disease, usually on the third to the fifth day; therefore, if the diphtheritic sore throat shows earlier than the rash or, *vice versa*, after the end of the first week, then we may think that we have to deal with a genuine diphtheria, which becomes the more probable the later it occurs. Scarlatinal sore throat spreads often into the choanæ, but almost never affects the larynx; therefore, if in the scarlatinal patient diphtheria appears late and extends into the larynx, a genuine diphtheria becomes very probable; the diagnosis is undoubted if the characteristic diphtheritic paralyses occur in the period of recovery.

Cases of scarlet fever complicated with genuine diphtheria occur in private practice very seldom, so that all cases of diphtheritic angina in scarlet fever may be held as malignant scarlatinal sore throat (or as scarlatinal diphtheria). Proceeding in such a way, the physician has very little chance of making a mistake; but in badly constructed hospitals, where all contagious patients are placed together in the same ward, cases of double infection are common.

In doubtful cases of all kinds of spotted or membranous sore throats one must have a bacterioscopic examination of particles of membrane, taken from the patient's throat, because at the present time it is well proven that in all cases of genuine diphtheria the Kiebs-Löffler bacillus can be found in the membranes. He who is familiar with the question of the diagnosis of diphtheria by the microscopic examination of the membranes or mucus, will agree with Roux and Yersin, that "nothing is easier and quicker than the microscopic examination of the false membranes, and nothing is more plain than obtaining colonies on serum." They advise this technique: Particles of the membrane should be dried by filter paper and smeared on the slide so that the latter should be covered with a sheath of the false membrane, but not of mucus; then the slide is passed through the flame and is stained by Löffler's methylene blue or by gentian-violet according to Gram.\* The stained specimen is washed

\*Our observations in the clinical infectious departments convinced us that Löffler's bacillus is not difficult to be found even without the removal of particles

with water and examined wet by immersion system. The diphtheritic bacilli are slightly bent, have club-like swelling at the ends, are granular and not proportionally stained. One must say that the swelling at the ends and the unequal staining are not visible in all specimens. In membranes of a true diphtheria such bacilli are met with constantly, even together with other microbes. For the diagnosis of diphtheria there is of value not so much the external appearance of separate bacilli as their method of grouping; for it is characteristic of diphtheria that the bacilli are situated on the specimen not in groups but as if forming "felt." The microscopical examination, exactly, takes only a few minutes and gives, in the majority of cases, entirely definite results. If the disease is near recovery the diphtheria bacilli diminish in number, while the secondary microbes increase—which circumstance is of importance in the prognosis. In slight cases the diphtheritic bacilli are very few in number from the very first, but there are a great many other microbes.

In instances where the number of bacilli is very small, then for the purpose of making the diagnosis, Roux and Yersin advise to employ cultures on blood serum, to which is added one-third of calf bouillon containing one per cent. sugar and pepton and 0.5 per cent. sodium chloride. This serum constitutes such a favorable medium for diphtheria bacilli that after fifteen hours entirely distinct colonies are obtained, while the majority of the secondary microbes only begin at the time to grow. It is sufficient to scrape with a platine loop the surface of the coagulated serum in two or three tubes which are then placed in the incubator at a temperature of 95 deg.—98 deg. F. (35 deg.—37 deg. C.). Usually after ten to fifteen hours diphtheria colonies are distinctly to be seen: roundish, white-grayish elevated spots with the centre less transparent than the periphery. But, as similar colonies may be produced by the coccus, one must, for controlling, prepare microscopic specimens and stain them. *Cultures may also be obtained from the dry membranes.*

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of membrane by the forceps; it is sufficient to scrape the surface of the membrane in the throat by a platine-loop and to put the observed mucus on the cover glass, to dry it and after that stain with Loeffler's methylene blue. For the preparation of such a stain we take a saturated alcoholic solution of methylene blue, filter and mix it together with aqueous solution of hydrate of potassium (1 : 1000), while for every 100 parts of the latter we take 30 parts of solution of the stain. The dried cover glass is put, together with the mucus, into the stain for ten minutes, then it is washed off with water, dried with filter paper, put on the slide with a drop of copaiba balsam, and the specimen is ready.

It is then necessary to wet them in sterile water (dry diphtheria bacilli may be conserved very long, standing a temperature of 96 deg.—97 deg. C. 179 deg.—181 deg. F.) during one hour.\*

Diphtheria bacilli seldom occur as pure in plain specimens or in cultures, being usually mixed with some other microbes, which should not be neglected, because from them we can judge of the malignancy of any given case. Observations show that purely bacillary and bacillo-coccus sore throats run a more favorable course than those where, together with the specific bacilli, a great number of streptococci are met with. It seems that almost all cases of so-called toxic or septic diphtheria could be placed among these bacilli-streptococcus sore throats.

There is an opinion that not very much stress should be laid upon the bacterioscopic examination, because the so-called *pseudo-diphtheria bacilli* are frequently met with in different kinds of sore throats, as well as in the mucus of the mouth of entirely healthy persons. This bacillus is analogous to a genuine diphtheria bacillus by its cultures and mode of development on blood serum, differing merely by not being poisonous (*i.e.*, inoculation of guinea-pigs by pure cultures of this bacillus proves negative). On this account Roux and Yersin remark that in non-diphtheritic sore throats as well as in healthy persons the bacilli always are very few; on serum there are obtained one—four colonies, or out of several tubes only in one. Therefore they affirm that the diagnosis of diphtheria by means of cultures cannot be betrayed by the presence of pseudo-diphtheritic bacillus, because, in the case of diphtheria, many characteristic colonies may be obtained.

Lately Fränkel pointed out Neisser's method of double staining to be the right way of determining the true or false diphtheritic bacillus.† The technique of this method is not difficult: the dried, smeared-on-the-cover-glass particle of the examined culture is put for from one to three seconds in an acetic acid solution of methylene blue, then washed off with water and stained for three to five seconds with a watery solution of Bismarck brown. The genuine diphtheritic bacilli become yellowish-gray, containing at the ends violet-blue granules. These granules are entirely wanting in the pseudo-diphtheria bacilli. Fränkel asserts that any micro-organism cannot be held as a

\*Vratch, 1890, p. 708.

†Berliner Klinische Wochenschr. 1897, No. 50.

genuine diphtheritic one, if the polar bodies be not manifested by Neisser's method of double staining. The composition of the stains for Neisser's method is the following :

1. Methylene blue, 10 (gr. xvi.); alcohol, 96%—20.0 (3 v.); glacial acetic acid, 50.0 (3 1/3 v.); Aq. destill. ad. 1000.0 (lb.iii).
2. Watery solution of Bismarck brown 2:1000.

—*The Clinical Review.*

## Therapeutics.

### **The Treatment of Excitement and Insomnia.**

A consideration of the value of certain hypnotics and of physical methods of producing sleep and restfulness, especially in the insane.

1. Chloral, recommended in all forms of excitement, especially in delirium tremens. In neurasthenia the drug should be given in small doses and with great caution. The dose does not require to be increased, 30—45 grains recommended. Not to be given subcutaneously.
2. Chloralmid is less toxic, and acts less quickly. Dose, 15—45 grains.
3. Butyl chloral not often used, but has advantages, especially in cardiac weakness.
4. Chloral-urethane. Liebreich says it has no advantages over chloral.
5. Choral-antipyrine, 15 grains may be given if there is pain. The drug has no smell or odor, and can be given subcutaneously.
6. Choralose, dose 7½ grains. Richet says its action in part resembles chloral, in part that of strychnine.
7. Chloretone, 5—20 grains. This drug is anesthetic to exposed nerve fibres; according to Impens it is more dangerous than chloral.
8. Urethane, ethyl carbamate, 10—60 grains. Is not regarded as valuable.
9. Hedonal, 8—15 grains. Krafft-Ebing has found this useful subcutaneously in a 1 in 10 sol. in alcoholism; especially recommended in anemic low conditions.
10. Hydrate of amylen, 30 to 80 min., best given in capsules. Sleep is calm, and there are no after-effects.
11. Dormiol, amylen choral, 5—50 min., best given with syrup or ext. liq. glycirrhizæ or in capsules. Sleep produced is calm and comes on about half an hour after administration.
12. Sulphonals. These include sulphonal, trional, tetronal,

and are a valuable series. A dose may be given of 15—30 grains for two days, then completely stopped for some time. Trional is said to be less liable than sulphonal to produce toxic symptoms. Some have thought these drugs to be especially useful in the cure of morphinism. Brissaud, in the treatment of insomnia of neurasthenies, uses the drugs as follows: If the patient is awake all night he advises the use of sulphonal, if partial sleep is obtained trional, and in those who wake early in the morning tetroonal.

13. Paraldehyde. This drug is very safe, as much as 100 drachms. The sleep produced is natural and refreshing. It should be given in *Tr. aurantia* or *Mist. amygdalæ*.

14. Opium. The preparations of opium act especially quickly and in small doses with neurasthenics, and, on the contrary, in the insane very large doses are tolerated. In states of insane misery opium is better than morphia. Codeine has been especially advocated in the insomnia of melancholia and hypocondriasis. Phosphate of codeine,  $\frac{1}{4}$ —2 grains, is said by Dheur to be the best hypnotic in melancholia. Laborde advocates narceine,  $\frac{1}{8}$ —1 grain. Heroine, 1-16 grain, is useful in the cure of morphinism. Dionin,  $\frac{1}{4}$ — $\frac{1}{2}$  grain, is also highly spoken of by some.

15. Hyoscine. This drug has an almost specific action on the motor side of excitement. It is not recommended in simple maniacal excitement. It is advocated in delirium of epilepsy and in certain cases of general paralysis. Dose, 1-200—1-100 grain.

16. Potassium bromide. The use of this drug is well known. McLeod has described its uses in certain cases of mania to produce continuous sleep.

The physical methods in use are :

1. Rest in bed, especially indicated in simple mania without delirium or hallucinations and in mental states due to intoxication.

2. Prolonged baths from 6—12 hours. The temperature should be 90—95 deg. F., recommended in many forms of excitement, especially in mania.

3. Cold baths and cold douches, not of much use in mental diseases, but may be useful in delirium tremens, a temperature of 65 deg. F. being recommended, the patient being immersed until the sedative action becomes manifest. After leaving the bath an alcoholic drink is given, and the skin of the patient rubbed by rough towels. Cold douches or a wet pack may be used for a similar purpose.—M. Trenel, in *The Medical Chronicle*.

**Ice for Nausea.**

A physician advances the theory that the distressing sensation of nausea has its seat in the brain, and not in the stomach, and that relief may be obtained by cooling the base of the brain. He claims to have tested this often and thoroughly in the case of sick headache, bilious colic, cholera morbus, and other ills in which the nausea is a distressing symptom, without a single failure; also, that he once relieved the nausea resulting from cancer of the stomach by the application of ice to the back of the neck and occipital bone. The ice is to be broken and the bits placed between the folds of a towel. Relief may be obtained by holding the head over a sink, or tub, and pouring a small stream of water on the neck.—*Dietetic and Hygienic Gazette*.

**Remedy for Colds.**

A favorite remedy for colds in the head with R. E. Mason (*Medical World*) is as follows:

R.	Quinine bisulph.				
	Dover's powder, camph.	.....	aa	5	ss.
Po. ext.	belladonna				
Po. aloin	.....		aa	gr.	iiij.
Po. capsicum	.....			gr.	v.

M. et ft. caps. No. 12. Sig.: One every three hours after taking a glass of milk. Light diet and one five-grain dose of calomel at beginning of treatment.—*Ex.*

**Diuretic Powder.**

The following formula for a diuretic is credited to Bamberger by *Gaillard's Medical Journal*:

R.	Calomel.	.....	gr.	iiij.	
	Powd. ext. opium	.....	gr.	½	
	Sugar.	.....	gr.	v.	

M. F. pulv. To be taken three times a day for three days.—*Clinical Review*.

**Applications for Chilblains**

The following formulæ appear in Merck's Archives:

Balsam peru.	.....	dr.	2.
Ichthyol	.....	dr.	2.
Lanum	.....	dr.	4.

Apply freely to inflamed part.

Tannic acid.....	dr. 1.
Carabolic acid.....	dr. $\frac{1}{2}$ .
Tinct. iodin.....	dr. 2.
Simple cerate .....	dr. 4.

Apply freely, on lint

Carabolic acid .....	gr. 15.
Lead ointment.....	dr. 5.
Lanum .....	dr. 5.
Expr. oil almond .....	min. 150.
Oil lavender.....	gtt. 2.

Apply three times a day on ulcerated chilblains.—*Medical Standard.*

#### Bruises.

"Black eyes" or other temporary discolorations of the skin may be disguised by the application of pink grease paint, or collodion colored by means of a little carmine. As a lotion, the following have been recommended :

(1) Ammonium chlorid .....	1 oz.
Alchol.....	1 fl. oz.
Water .....	10 fl. oz.

Diluted acetic acid may be substituted for half of the water, and the alcohol may be replaced by tincture of arnica, with advantage.

(1) Potassium nitrate .....	15 grn.
Ammonium choride .....	30 grn.
Aromatic vinegar .....	4 dr.
Water, to make.....	8 oz.

—*Dietetic and Hy. Gazette.*

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#### Herpes Zoster.

The local treatment of herpes zoster, according to the *Encyc. Med. and Surgery*, consists in protecting the parts from injury and infection and to relieve the pain. For the latter symptom the following is recommended :

B. Morph. sulph. .....	gr. v.
Pulv. camphoræ .....	gr. xx.
Pulv. zincí oxidí.....	$\frac{1}{2}$ lb.

M. Sig.: Dust on the affected area, cover with cotton, and bandage.

Or the following may be substituted :

B. Morph. sulph. .....	gr. x.
Collodii (flexible).....	$\frac{1}{2}$ lb.

M. Sig.: To be painted over the affected areas.

The galvanic current, applied along the course of the nerve, may be advantageous in giving marked relief from the pain.

Internally the following may be prescribed if the pain becomes so severe as to require an anodyne :

B.	Morph. sulph. ....	gr. 1/8.
	Phenacetini .....	gr. ii.
	Quinice sulph. ....	gr. i.

M. Ft. cap. No. i. Sig.: One such capsule every four hours.

The phosphide of zinc, given in doses of one-third (.02) of a grain and repeated every three hours, is strongly recommended. For the neuralgia persisting after the eruptions has disappeared, quinin, iron, strychnin and arsenic are of value.—J. A. M. A.

#### Some Headache Formulae.

Randolph (*Med. Council*) recommends the following : In acute alcoholic headache give saline cathartics first to clean the bowels of all offending material, then prescribe :

B.	Potassium bromid .....	ʒ ss.
	Chloral hydrate.....	ʒ ij.
	Hyoscyamus tincture.....	ʒ ij.
	Ammon. valerianate tinct. ....	ʒ ij.

M. Sig.: Teaspoonful in a tablespoonful of water every hour until the headache is relieved.

The following is also useful :

B.	Arom. ammonia spirit .....	aa ʒ ij.
	Comp. ether spirit .....	ʒ jss.
	Camphor tinct. ....	ʒ jss.
	Hyoscyamus tincture.....	ʒ ijss.
	Sodium bromid .....	ʒ ij.
	Comp. lavender spt. ....	ʒ ij.

M. Sig.: Teaspoonful in two tablespoonfuls of water every hour until relieved.

For dyspeptic headache the following is admirable :

B.	Sodium bicarbonate.....	gr. lxxij.
	Dil. nitro-hydrochloric acid .....	gt. lxxij.
	Nux vomica tincture .....	gtt. xlviij.
	Comp. genitan tinct. ....	
	Glycerin .....	aa ʒ jss.

M. Sig.: Teaspoonful in a gill of water one hour after each meal.

In cases of very bad digestion I use:

R. Pepsin essence.....	5 jv.
Nux vomica tinct.....	
Dil. nitro-hydroch. acid.....	aa gtt. clx.

M. Sig.: Two teaspoonfuls in a wineglass of water one hour after each meal.

*Headache of cerebral congestion requires:*

R. Sodium bromid .....	5 j.
Veratrum viride tinct.....	gtt. xxjv.
Ginger syrup.....	ss.
Orange-flower water .....	3 ijss

M. Sig.: Teaspoonful in two tablespoonsfuls of water every two hours.—*Medical Fortnightly.*

## The Physician's Library

*A System of Physiologic Therapeutics.* A Practical Exposition of the methods, other than Drug-giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M. M.D., Professor of Medicine and Therapeutics, in the Philadelphia Polyclinic, etc. Vol. VI. Dietotherapy and Food in Health. By NATHAN S. DAVIS, JR., A.M., M.D., Professor of the Principles and Practice of Medicine in North-Western University Medical School, etc. Philadelphia: P. Blakiston's, Son & Co. Canadian Agents: Chandler & Massey Limited, Toronto.

The subject of dietetics is one of the most important in the treatment of disease, and is important because many of the curable diseases are the result of defective digestion and metabolism. It is important, therefore, that every physician should be familiar with the composition of foods as well as with diet best suited in individual diseases. The volume before us is both a practical and scientific treatise upon dietetics. The author first briefly discusses the composition, nutritive value, and assimilation of foods. In this connection the results of the investigations of Professor Atwater, of the United States Department of Agriculture, have been made use of in compiling the text. The remaining portion of the book is devoted to "diet

in health," "infant feeding," "food as a cause of disease," and "diet in disease." We think that the volume is an excellent one, and heartily recommend it to the profession.

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*Progressive Medicine.* A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and *Materia Medica* in the Jefferson Medical College of Philadelphia, etc.; assisted by H. R. M. LANDIS, M.D., Assistant Physician Jefferson Medical College Hospital. Vol. I. March, 1903. Philadelphia and New York: Lea Brothers & Co.

The high standard of excellence which has been exhibited in this publication has been maintained in this volume. The subjects considered are the following: Surgery of the Head, Neck and Chest; Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia and Influenza; Diseases of Children, Pathology, Laryngology, Rhinology and Otology.

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*Morrow on Social Diseases.* The Relation of Social Diseases and Marriage. By PRINCE A. MORROW, A.M., M.D., Emeritus Professor of Genito-Urinary Diseases in the University and Bellevue Hospital Medical College; Surgeon to the City Hospital; Consulting Dermatologist to St. Vincent's Hospital, etc., New York. In one octavo volume of 390 pages. Cloth, \$3.00 net. New York and Philadelphia: Lea Brothers & Co. 1904.

The importance and practical value of this new and timely volume, written by a man of profound learning, long experience and sound common sense, upon a subject which so vitally concerns mankind individually and collectively, ensures its wide recognition. Venereal diseases in their origin, and especially in their far-reaching pathological effects, strike at the very root of race perpetuation. They blight the mental, moral and physical welfare of society as does no other agency. War, pestilence and famine are temporary; venereal diseases constantly ravage all grades of society. Since unlawful relations between the sexes have come to be known generally as "The Social Evil," the author has adopted the term "Social Diseases" to indicate the

infections most usually thus acquired. Their frequent infliction upon innocent victims through legitimate marital relations involves consequences which affect not only the health, but the peace, honor and happiness of the entire family, and the importance of venereal prophylaxis is beyond words. Heretofore no comprehensive treatise upon the subject has existed in our language, and it is fortunate for the profession and laity alike that an author of Dr. Morrow's achievements and established ability is the first to enter the field. The work sets forth clearly the dangers introduced by venereal diseases into marriage—dangers to the wife, dangers to the offspring, and dangers which come from their morbid irradiations in family and social life. The fulfilment of the protective duty, which has for its object the preservation of the helpless and innocent from infection, realizes the highest ideals of preventive medicine: and, while this duty devolves especially upon the physician, every member of the community is, and should be, the protector of the wife and mother and the preserver of the health and welfare of future generations. Not the least interesting chapter presents the author's views upon the "Medical Secret" and the exercises of professional discretion in restraining improper marriages, and gives valuable hints for the physician's guidance in many of the involved questions which so frequently arise. In dealing with these situations there is required not only a thorough knowledge of these diseases in all their recently revealed relations, but also a knowledge of human nature, and a professional sagacity which is not taught in the curricula of the medical schools.

It is to furnish just this knowledge that this book has been written, and its perusal, in fact, its study, may well be recommended not only to every physician, but to every thoughtful adult.

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*Aids to Surgery.* By JOSEPH CUNNING, M.B., B.S., F.R.C.S. (Eng.), Senior Resident Medical Officer Royal Free Hospital. London : Bailliere, Tindall & Cox. Canadian Agents: J. A. Carveth & Co., Limited, Toronto. Price, \$1.25.

For students preparing for examinations, this book will be found of real value. We have often advocated reading the large text-books up to within two months of examination time, and then a concise "aid," such as we now have before us. These condensed treatises impress the leading and more important

facts upon the memory. The work contains 384 pages, every one of which is brimful of information for the student preparing for examination.

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*A Text-Book of Legal Medicine and Toxicology.* Edited by FREDERICK PETERSON, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and WALTER S. HAINES, M.D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Per volume: Cloth, \$5.00 net; sheep or half morocco, \$6.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 413 Parliament Street, Toronto.

This work presents to the medical and legal professions a comprehensive survey of forensic medicine and toxicology in moderate compass. For convenience of reference the treatise has been divided into two sections, Part I. and Part II., the latter being devoted to toxicology and all other portions of legal medicine in which laboratory investigation is an essential feature. Under "Expert Evidence" not only is advice given to medical experts, but suggestions are also made to attorneys as to the best methods of obtaining the desired information from the witness. The Bertillon and Greenleaf-Smart systems of identification are concisely and intelligently described, and the advantages of each stated. An interesting and important chapter is that on "The Destruction and Attempted Destruction of the Human Body by Fire and Chemicals;" for on the determination of the human or animal source of the remains frequently depends the legal conduct of a given case, and the guilt or innocence of the accused. A chapter not usually found in works on legal medicine, though of far more than passing significance to both the medical expert and the attorney, is that on the medi-colegal relations of the X-rays. The responsibility of pharmacists in the compounding of prescriptions, in the selling of poisons, in substituting drugs other than those prescribed, etc., furnishes a chapter of the greatest interest to everyone concerned with questions of medical jurisprudence. Also included in the work is the enumeration of the laws of the various states, relating to the commitment and retention of the insane. In fact, the entire work is overflowing with matters of the

utmost importance, and expresses clearly, concisely, and accurately the very latest opinions on all branches of forensic medicine and toxicology.

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*The Practical Care of the Baby.* By THERON WENDELL KILMER, M.D., Associate Professor of Diseases of Children in the New York School of Clinical Medicine; Assistant Physician to the Out-Patient Department of the Babies' Hospital, New York; Attending Physician to the Children's Department of the West Side German Dispensary, New York. 12mo. Pages xiv.-158, with 68 illustrations. Extra cloth, \$1.00, net, delivered. Philadelphia : F. A. Davis Company, 1914-16 Cherry Street.

This is one of the most practical expositions of the subject of the practical care of the baby we have been privileged to inspect. The illustrations add greatly to its value; and the text is clear and concise. No nurse should be without it, and the accoucheur will find therein many valuable pointers to convey to intelligent mothers. A copy of it might safely be placed in the hands of many of them.

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*The Treatment of Fractures.* With Notes Upon a Few Common Dislocations. By CHARLES L. SCUDDER, M.D., Surgeon to the Massachusetts General Hospital. Fourth edition, thoroughly revised, enlarged and reset. Octavo volume of 534 pages, with nearly 700 original illustrations. Philadelphia, New York, London : W. B. Saunders & Company. Canadian Agents: J. A. Carveth & Co., Limited, 413 Parliament Street, Toronto. Polished buckram, \$5.00 net; sheep or half morocco, \$6.00 net.

Four large editions of this work in less than four years testify to its value. The book is intended to serve as a guide to the practitioner and student in the treatment of fractures of bones. The student sees the actual conditions as they exist in fractured bones, and is encouraged to determine for himself how to meet the conditions found in each individual case. Methods of treatment are described in minute detail, and the reader is not only told, but is shown how to apply apparatus, for as far as possible all the details are illustrated. This elaborate and complete

series of illustrations constitutes a feature of the book. There are 688 of them, all from new and original drawings and reproduced in the highest style of art. Several chapters of special importance are those on Gunshot Fractures of Bone; The Rontgen Rays and Its Relation to Fractures; The Employment of Plaster-of-Paris, and the Ambulatory Treatment of Fractures. In this fourth edition many new illustrations have been added, thus increasing the accuracy of this part of the work. The text has been thoroughly revised, thereby bringing the book absolutely abreast the times. X-ray plates of the epiphyses at different ages have been arranged. These will be found of value, not only as an anatomical study, but in the appreciation of epiphyseal lesions. An important addition is that of a chapter upon a few common dislocations. This chapter, like the rest of the book, is amply illustrated, and the accepted methods of treatment described.

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*Surgical Diseases of the Abdomen, with Special Reference to Diagnosis.* By RICHARD DOUGLAS, M.D., Formerly Professor of Gynecology and Abdominal Surgery, Medical Department, Vanderbilt University, Nashville; ex-President of the Southern Surgical and Gynecological Association; Fellow of American Association of Obstetricians and Gynecologists; Member of the British Gynecological Association, etc. Illustrated by 20 full-page plates. Philadelphia: P. Blakiston's, Son & Co. Canadian Agents: Chandler & Massey, Limited, Toronto.

The writer of this very excellent work has been a teacher and practical worker in the special field of abdominal surgery for eighteen years, which experience ought to qualify him to give to the medical profession much that will prove both valuable and useful in that department of surgery. In this volume Dr. Douglas has presented only those facts as have seemed to him of practical usefulness, and which have borne the test of application. It has been his object in contributing this volume to medical literature to elucidate the difficulties of diagnosis by a more thorough study of the causes and nature of these conditions. Operative technique has not been reproduced, but the proper surgical procedure is indicated. He has also discussed

some of the open questions involving the operative treatment and after management of abdominal cases. The volume embraces 866 pages of text, whilst the plates are new and excellent.

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*Plain Hints for Busy Mothers.* By MARIANNA WHEELER, Superintendent of the Babies' Hospital, New York, since 1891, and author of "The Baby." With illustrations in outline. Substantially bound in flexible leatherette. Price, 35 cents. New York : E. B. Treat & Co., 241-243 West 23rd Street.

This little hand-book, as its name implies, is intended as an aid to mothers whose means are limited, and who must care for their own babies, at the same time attending to their housework. It is written in such a plain and simple manner, that no one could fail to understand its directions. It is full of common-sense advice as to general health, clothing, food, bathing, fresh air, etc. Its pages on "Dont's" are specially practical and helpful.

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*Clinical Surgery.* By A. J. OCHSNER, M.D., of Chicago. Surgeon-in-chief Augustana Hospital, and St. Mary's Hospital; Professor of Clinical Surgery, University of Illinois. Chicago: Cleveland Press (The Clinical Review Publishing Company). Canadian Agents: Chandler & Massey Company, Toronto. 500 pages. Cloth bound, price, \$7.00.

Professor Ochsner, of Chicago, has given to the profession a work which deserves more than a passing notice. The book is not intended for the distinguished surgeon, but for the average practitioner who does surgery, and is largely the material of his clinical lectures which brought the writer into prominence as a teacher. Professor Ochsner has adopted the plan of extensively illustrating his subjects. The numerous plates are for the most part original illustrations from immediate operations by the author. The book is packed full of the most approved and practical suggestions. The chapter on the various forms of hernia deals quite fully with the subject, and the cuts give one a clear idea of the author's operations for the radical

cure of this common affliction. This chapter alone is well worth the price of the book. In the reviewer's opinion kangaroo tendon would be a more suitable suture to close the internal and external layers in inguinal hernia. The chapters on surgery of the abdomen, mouth, face and skull are very practical. In fact, the whole book is the result of years of actual practice, and the younger surgeon will find many suggestions to help him in his work. The volume is well catalogued, well bound, printed in large, clear type, and in general make up does great credit to both author and publisher.

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*The Medical Epitome Series. Organic and Physiologic Chemistry. A Manual for Students and Practitioners.* By ALEXIUS McGLANNAR, M.D., Associate Professor of Physiologic Chemistry; Instructor in Clinical Laboratory, College of Physicians and Surgeons, Baltimore, Md. Series edited by V. C. PEDERSEN, A.M., M.D., Instructor in Surgery and Anesthetist, and Instructor in Anesthesia at the New York Polyclinic Medical School and Hospital. Illustrated with nine engravings. Philadelphia and New York: Lea Brothers & Co.

In this volume there has been selected from an immense mass of knowledge, such facts as are essential to medical students and practitioners. This has been accomplished in a style brief and clear. For the facts stated, the author has drawn on all the available works on the subject. This volume keeps up the established reputation of the Medical Epitome Series, and will be found of inestimable value to the medical student.

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*Quiz Compend.* Compend of Diseases of the Ear, Nose, and Throat. By JOHN JOHNSON KYLE, B.S., M.D., Lecturer on Otology, Rhinology and Laryngology, and Assistant to the Chair of Surgical Pathology in the Medical College of Indiana, etc., etc. With 85 illustrations. No. 19. Philadelphia: P. Blakiston's, Son & Co.

This volume will keep up the reputation of Blakistons' Quiz Compend. It is practical and will readily convey a practical knowledge of the subjects handled. In fact, students will find

that on the eve of examinations a volume of this character will be an important helpmeet, and enable them to command a wider range of knowledge than can be less readily grasped from the larger special works

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*How to Attract and Hold an Audience.* A Popular Treatise on the Nature, Preparation, and Delivery of Public Discourse. By J. BERG ESENWEIN, A.M., Lit.D., Professor of the English Language and Literature in the Pennsylvania Military College. Price, \$1.00, postpaid. New York: Hinds & Noble, 31-35 West 15th Street.

Doctors, like others, are frequently called upon to address audiences, be they large or small; and a knowledge of the rules to apply in securing an easy and graceful delivery should be of the utmost importance. "How to Attract and Hold an Audience" is an art possessed by few, but it can be both cultivated and bought. The way to do this is to buy the book and cultivate it afterwards, using this as guide, which is a good one. The book is well worthy a place in every medical man's library.

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# Dominion Medical Monthly

And Ontario Medical Journal

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## OUR PRIZE COMPETITION

On the opposite page will be read the announcement of our prize competition, and on another page, rear form, advertising, will be found a presentation of the \$125.00 microscope, complete in every detail, which will be shipped to the successful contestant from the well-known house of Lyman, Sons & Company, St. Paul Street, Montreal. So far as we know there has never been offered to the medical students and medical practitioners of Canada a prize of such undoubted value as the one we are offering for the best original paper on "The Pharmacology and Therapeutics of Salicylic Acid and Its Preparations." Every item in connection with this contest will be governed by the strictest honesty. The gentleman who has been selected to read the papers and pronounce upon their merits, will do so without the slightest knowledge of the identity of the writer. We have selected a subject which should be a popular one; and it is our first aim that some valuable

theses upon this subject may be secured for the benefit and knowledge of all who are constantly using and prescribing some one of its many preparations. Whilst the subject will commend itself to practitioners of medicine, who have had opportunities of observing the effects of this drug in the treatment of disease, it is not by any means one that should shut out the medical student; indeed, the latter should be able to make a presentation of almost equal value with the physician in practice. If the contest prove successful in the way of securing good papers for a symposium on the subject in a future issue of THE DOMINION MEDICAL MONTHLY, we shall be well repaid, and shall not hesitate to make further announcements similar in character from time to time. The contest will be limited strictly to physicians of the regular school practising in Canada, and to the medical students attending Canadian medical colleges.

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#### THE PROPOSED NEW ASSESSMENT LAW AS IT AFFECTS PHYSICIANS.

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Although we have not a printed copy of the proposed new Assessment Act for the Province of Ontario before us, we believe that Clause 7 of said Act will read somewhat as follows: Irrespective of any assessment of land under this Act in cities, towns and villages, every person occupying or using land in the municipality for the purpose of any business mentioned or described in this section, shall be assessed for a sum to be called "business assessment," to be computed by reference to the assessed value of the land so occupied or used by him as follows: Sub-section (c), every person practising or carrying on business as a barrister, solicitor, notary, public conveyancer, physician, surgeon, oculist, aurist, medical electrician, dentist, veterinarian, civil or mining or consulting or mechanical or electrical engineer, surveyor or architect, for a sum equal to 50 per cent. of the said assessed value. It will be seen by this that the income tax is to be abolished and a business tax substituted therefor. It is quite evident that this Act is going to discriminate against the medical profession, and to bear especially hard upon young practitioners and upon those who have ceased in their old age to carry on an active practice. To take Toronto

for an example: The young practitioner must work five or six years before he can command an income of \$1,000. Up to the time he reaches over \$700 he is exempt; but if he is making \$1,000 he is assessed at \$300, which, at Toronto rate, would be about \$5.70, taking it at 19 mills. Under the new Act, if he has his surgery and apartments in a \$6,000 house he will be required to pay 19 mills upon \$3,000, upon a 50 per cent. basis. This will mean to him a "business tax" of \$57, whilst he may not be making ten times that sum. It operates upon the aged practitioner in a similar manner. We believe we have said sufficient to cause the medical profession of the province to issue a strong protest against any such discrimination, and that, too, in the face of the unlimited service physicians and surgeons are constantly rendering the community in the way of preventing disease and attendance upon hospitals and charitable institutions. We understand that the matter has been taken up in one of the Toronto medical societies, and a committee named to confer with other societies and the profession at large in the different cities and towns and villages (incorporated) of the province. The attempt to pass any such measure into law should be resisted in the strongest possible manner. No doubt the matter will be watched with the keenest interest, but that will avail naught if some decisive action be not at once taken.

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#### THE SERUM TREATMENT OF HAY FEVER.

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A writer on the above subject (Lewis S. Somers) groups cases of hay fever into three classes: Those in which a neurotic element apparently predominates; those in which a general systematic condition, such as lithemia, predominates; and those in which the outburst of hay fever is closely associated with the presence of pollen in the atmosphere. For seven years Dr. Dunbar, of Hamburg, has been conducting experiments, seeking the cause of this distressing malady and a cure for it. His firm belief now is that the specific cause of hay fever, or the casual agent, resides in the pollen of certain grains. This will produce the disease in the predisposed, but will have no effect whatever upon persons not susceptible to the disease. The specific casual agent, or toxin, is an albuminoid body found in the starch particles of the pollen granules. Such cereals and grasses as corn, wheat, oats, rye and maize, golden

rod, rag-weed and hog-weed distribute this toxin in the air, which, alighting upon the secretions of the respiratory tract in which it is soluble, produces the disease known as hay fever, that is if the person be susceptible, the peculiar symptom-complex taking place as completely in winter as in any other season. The nature of the susceptibility seems to be entirely obscure. By repeated experiments upon animals, Dunbar obtained the development of the antibody in the blood, which antitoxin neutralizes the toxin and immediately subdues the hay fever symptoms. For practical purposes it is applied by dropping one or two drops into each eye and nasal chamber whenever irritation is present, or an attack is expected. Dried serum may also be employed with an inert powder in the nasal chambers, to be repeated as necessary. Somers' experience with the serum on this continent embraces a series of ten cases. He used the antitoxin made from the serum of animals, inoculated with the pollen toxin of golden rod, and employed it both in the form of the serum and as a powder. Although the number of his cases are small, scarcely sufficient to base accurate conclusions thereon, he gives the following: (1) The serum produces prompt and positive amelioration of the symptoms of fall hay fever in the majority of cases; (2) in a smaller number this favorable result is soon accompanied with the complete disappearance of the affection; (3) where slight, or no action is seen after its use, pollen as an etiological factor does not predominate; (4) when results are obtained, it favorably influences all the manifestations of hay fever; (5) while I am unable to state from personal experience the effect of the serum upon hay fever occurring at other times of the year, or upon its effects when administered in advance of the attack, yet when given during the attack, irrespective of its severity, it produces marked palliation rather than absolute cure; (6) its effects upon future attacks remain as yet unknown; (7) the serum in powder form is slightly soothing to the nasal mucosa; has but little influence upon the other symptoms of the affection, and in occasional cases it may act as a direct irritant.

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#### DOES IT PAY TO BE A DOCTOR?

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We have been favored with a copy of the February issue of *Frank Leslie's Popular Monthly*, the initial article of which has the above title, written by Arthur Goodrich. The following

preamble, by the editors, introduces the article : "There is no group of men of like importance in this country whose pictures and personalities are so unfamiliar to the public as those of our distinguished physicians and surgeons. The fact is a striking commentary upon the unique conservatism which has marked a single profession apart in our commercial age. The interesting portraits which we have chosen to accompany this article are representative, in the best sense of the word, but space prevents our including in the list more than a very small number of the eminent men whose pictures would fittingly serve to illustrate an article dealing with the profession in America." The portraits of the men who adorn this article are well-known to the medical profession, their reputations, as well as their physiognomies—William Williams Keen, Nicholas Senn, William Osler, James William White, W. T. Councilman, J. Collins Warren, Charles McBurney, E. L. Trudeau, Roswell Park, Matthew D. Mann, Francis Delafield, and Abraham Jacobi. The article is an exceptionally interesting one. Some of the passages are worthy of reproduction. "How does the profession, as a whole, justify its pretensions to philanthropy, and purposely limit its business success for the sake of the people? In what way does the practice of medicine differ from that of law or from business? Was there ever a movement on the part of lawyers as a body, to prevent unnecessary legislation? Most certainly not. Have manufacturers ever banded together to limit production or to restrict sale? The medical profession, as a body, and by individuals, is striving constantly to improve the general health of every community in which it works." Again, "If a machinist invents a tool he patents it and draws royalties. No doctor who invents a new surgical implement or apparatus thinks of patenting it or of getting any money for it." This also is true: "Hundreds of physicians and surgeons are constantly doing things that are really great. The public has never heard of them and probably never will. The profession knows them and respects them." When a soldier on the field of battle saves a life at the risk of his own, or does a heroic deed, he is given the Victoria Cross. When a doctor isolates himself with small-pox patients, or drives twenty miles in the face of a terrific blizzard on the coldest night of the year to conduct a new life into the world, he simply does it for money or experience. The latter is sure. It is also truly remarkable how soon we forget our immediate wrongs. "Doctors are marks for respectable, as well as every-day, 'dead beats,' but they usually take their losses quietly and forget them in the press of work" Still, after all

has been said to our advantage or disadvantage, there is comfort in knowing that you have conducted your patient through a dangerous illness or a trying operation. There is eminent satisfaction in having ministered to the pangs of child-birth and seen your patient through an anxious puerperium, and finally leaving the threshold of that home in the early morning, conscious that the new-born cannot find fault with your technique. The practice of medicine has its humorous as well as its grave side : but its worries are not equalled in any other calling in life. The article is a most excellent one, and we have no doubt will do a great deal of good. Pity it could not be read the world around.

### Editorial Notes

#### PROFESSOR HALLIBURTON'S LECTURES AND NERVE REGENERATION.

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As the result of a foundation by Dr. Christian A. Herter, there is to be every year at the Bellevue Medical School, a series of scientific lectures on some subjects connected with medicine by a distinguished investigator, or teacher from some other medical school in Europe, or this country.

The first of these series of lectures was concluded on Wednesday of the present week and was given by Professor W. D. Halliburton, of the University of London, England.

Professor Halliburton is known as an original investigator in physiology and physiological chemistry, and as one whose conservative conclusions are considered worthy of every attention. His lectures have proved of more than usual interest.

Dr. Halliburton's delivery is excellent, and he evidently has the precious gift of teaching, which, needless to say, not all original investigators share. It is seldom that a body of students has had the opportunity to enjoy an intellectual treat of so high an order as this in which the *utile cum dulce* were mingled so as to create the feeling that perhaps there was, after all, a royal road to the learning of physiology.

One of the most practical of Dr. Halliburton's lectures, was that on nerve regeneration—a subject that can scarcely fail to be of interest to every practitioner of medicine. The matter has been recently investigated by a number of observers, especially Ballance and Purvis Stewart, in England, and in this country

by Howell, Huber, and Cushing. Ballance and Stewart have taught that cut nerves regenerate not only from the central stump, as Waller originally taught, but also in the periphery. Howell and Huber have found that while in the peripheral portion of a cut nerve some preparation for regeneration may be noticed, the axis cylinder, the essential part of the new nerve regenerated only from the central portion. In confirmation of this, Mott and Halliburton found a great activity of neurilemma cells, which, by the Golgi staining, may resemble nerve fibres, but are not true nerve fibres. This conclusion has been confirmed by the studies of Langley and Anderson at the University of Cambridge in England.

In clinical surgical reports there are certain cases which seem to contradict entirely the teaching of the necessity for new growth of nerve fibres, since apparently they point to direct union of severed ends and almost immediate re-establishment of nervous transmission. Cut nerves are sewed together and feeling is noted very soon afterwards. In these cases Professor Halliburton is convinced that it is not the physician who is at fault in his investigations, but the patient who, because of an eminently suggestive mood, wrongly interprets the sensations present. As a rule, whatever sensations may be supposed to be present in the region supplied by the cut nerve, they soon pass off and the true restoration of nervous function takes many weeks or even months, but true return of function, both sensory and motor, has followed nerve anastomosis.

This whole subject of nerve regeneration was treated in a masterly fashion and withal with a pleasant teaching manner that made the lecture always a source of unflagging interest. It is evident that Dr. Herter has done an excellent work in thus providing an opportunity for students of Bellevue to hear distinguished medical authorities outside of their own faculty and his example may well be imitated by other members of the profession, or by others who wish to confer a real benefit upon medical education. These lectures are sure to produce a sympathetic appreciation of the literature of important subjects and at the same time broaden the views of medical students which are apt to be narrow enough as the result of being constantly influenced by the opinions of a single set of specialists.

It is not long since a distinguished foreign medical visitor announced that within a few years European medical students would come to America in order to finish their practical medical education. Under the inspiration of medical opportunities, such

as these, we can readily realize that the truth of such a prophecy will be seen much sooner than would otherwise be expected.—*Editorial, Med. News.*

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### THERAPEUTIC VALUE OF YEAST.

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The *Journal of the British Royal Army Medical Corps*, December, has an editorial dealing with yeast as a therapeutic agent. Beer yeast, the product referred to, has long been known as a home remedy for boils, carbuncles, and other inflammatory conditions. According to the editorial in question, Preston and Taruella (*Revista de Med. y Cirurgia*, June 15th, 1901) were the earliest workers to adduce experimental proof of the value of yeast, the most important of their conclusions being the following : (1) Beer yeast exercises a local and general curative action upon streptococcal and staphylococcal infection in rabbits, when administered hypodermically for five to twelve days in 10 c.c. doses of a well-grown culture; (2) similar injections repeated for four consecutive days render rabbits immune to these coccal infections; (3) the curative principles of yeast are intracellular and act only after liberation by a leucocytic or humoral ingestion of the cell; (4) blood serum of rabbits treated by yeasts has an agglutinating action upon streptococcus and staphylococcus albus and aureus. Yeast cultures in beef and barley medium show this same power after two days' growth and lose it when heated to 55 deg. C.; (5) mixed cultures of yeast and streptococcus and staphylococcus produce attenuation of the virulence of the latter; (6) in the pus of a subject treated by yeast the pyogenic organisms decrease in number and in virulence.

It is further stated that only about seven-tenths of an average sample of beer yeast consists of *saccharomyces cerevisiae* the rest being impurities. If a yeast be kept in a dry but cool place it is capable of secreting its soluble ferments after a long lapse of time; moisture and warmth alter its character rapidly, mainly by enabling the impurities to replace the true *saccharomyces cerevisiae*. The results obtained by yeast in the treatment of boils and carbuncles are apparently due to its antiseptic, phagocytic, and immunizing action, not to any specific action upon particular pathological lesions. Infantile diarrhea, infective and micromembranous enteritis or dysentery have all been much relieved by the action of beer yeast.

In 1895 Cassaet recommended beer yeast for the treatment of diabetes mellitus, its beneficial action in this disease depending upon the conversion of all starchy elements into alcohol. Boigey confirms these statements.

Many other diseases are said to be much benefited by treating with yeast. The claim is not made for yeast that it is by any means a universal panacea, but it is asserted that, judging from experimental and clinical facts, it is a valuable remedy.—*Medical Record*.

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### News Items

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THE death-rate for Quebec is 19.9.

ALL our advertisements are worthy of your attention.

THE death-rate for Toronto is 15.4; Hamilton, 14.6; London, 15.2.

TWO HUNDRED people die each year in British Columbia from tuberculosis.

DR. KENNEDY has been appointed surgeon for the Grand Trunk at Port Dover.

THE Jubilee Hospital, Victoria, B.C., has been presented with a Finsen Light apparatus.

THE births registered in Ontario during 1902 were 47,790 as compared with 46,061 in 1901.

ADVERTISEMENTS.—The doctor owes it to good medical journalism to read the advertisements.

DR. G. C. FERGUSON has given up his medical practice in Strathroy and has removed to Toronto.

DOMINION MEDICAL PRIZE COMPETITION.—For announcement *re* this, see page facing first editorial page.

DR. F. A. LACKNER has returned from an extensive stay at Didsbury, Alta., and resumed his practice in Hespeler.

THERE were twenty deaths from scarlet fever and seventy-one from diphtheria in Ontario during December, 1903.

THE British Columbia Board of Health will take vigorous steps to check the spread of tuberculosis in that province.

IN the Out-Patient Department of the Royal Victoria Hospital, Montreal, during 1903 there were 4,398 patients treated.

DR. WALTERS, New Hamburg, has sold out his practice to Dr. Withrow, of Woodstock, who took charge 1st of February.

DR. C. A. HONGETTS, Provincial Inspector for the Ontario Board of Health, has succeeded Dr. Bryce as Secretary of the Board.

THE Hamilton Board of Health has recommended the increase of the medical health officer's salary from \$1,400 to \$1,800.

A CONSUMPTION sanitorium for British Columbia is proposed and the Provincial Government will be approached for a grant of \$25,000.

DR. J. T. NORMAN, of Toronto, has been appointed assistant superintendent of the Institution for the Feeble-Minded, at Orillia, Ont.

DR. T. W. DANIEL, St. John, N.B., has been chosen to contest St. John for the Dominion Parliament, in the Liberal-Conservative interest.

DR. S. N. DAVIS, of Parry Sound, has been appointed associate coroner for the District of Parry Sound, in place of David McFarlane, resigned.

THE epidemic of typhoid fever in the suburbs of Montreal is now well in hand, as very few cases have been reported during the past two weeks. In all there were over 600 cases.

AMONGST Canadians who attended the recent Tuberculosis Exposition at Baltimore, were Professor J. George Adami, of McGill, and Dr. J. H. Elliott, of the Gravenhurst Sanitorium.

DR. PETER H. BRYCE has resigned from the secretaryship of the Ontario Board of Health, and has accepted office under the Federal Government. His duties will pertain to immigration and Indians.

DR. T. H. MOHER, assistant superintendent of the Institution for the Feeble-Minded, at Orillia, Ont., has been promoted to the position of medical superintendent of the Asylum for the Insane, at Brockville, Ont., succeeding the late Dr. Murphy.

THE total number of patients treated in the Jubilee Hospital, Victoria, B.C., was 117; admitted during the year, 65.

THE Diet Dispensary of Montreal issued 13,236 orders during 1903. Of this number 473 were half price; 1,119 paid and 11,564 free.

BRITISH COLUMBIA will seek to have a university established at Victoria and we will probably yet see a medical school on the Pacific Coast.

WESTERN GENERAL HOSPITAL, MONTREAL.—The number treated in this hospital during 1903 was 600; 11 more than for 1902. The death-rate was 5.16 per cent.

ROYAL VICTORIA HOSPITAL, MONTREAL.—On January 1st, 1903, there were 188 patients in this hospital; discharged during the year, 2,911; died, 142; remaining at the end of the year, 208.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.—Why should not every doctor in Canada be a member of this worthy organization? One never knows when his time will come for legal trouble.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.—If you have not become a member of this worthy organization, probably the best ever instituted for the medical profession of Canada, this will serve as a reminder that you ought to join now.

IN Victoria, B.C., during 1903, there were 66 cases of diphtheria reported, with 6 deaths, and 117 cases of scarlet fever with 2 deaths. At the Lazaretto, on D'Arcy Island, there are two lepers, both Chinese. Taking the population of Victoria at 25,000, the average death-rate per 1,000 during the past three years has been 11.57.

THE British Columbia Association for the Prevention and Cure of Tuberculosis was formed on the 20th of January, with the Lieutenant-Governor, Sir Henri Joly, as Hon. President, and Dr. Proctor, of Kamloops, as Secretary; Dr. C. J. Fagan, Victoria, Treasurer. On the Executive Committee, Drs. J. C. Davie and R. E. Walker.

REMEMBER the dates of the Ontario Medical Association: June 14th, 15th and 16th at Toronto, under the presidency of Dr. James F. W. Ross, of this city. Dr. Charles P. Lusk,

Bloor Street West, is the general secretary. Dr. Albert A. Macdonald is the chairman of Committee on Papers and Business; Dr. Allen Baines is the chairman of the Committee of Arrangements.

DR. E. FLATH, who took Dr. Graef's practice in Clifford some three years ago, was married to Miss Irwin, of Chelmsford, and intends living in Drayton, where he has gone into partnership with Dr. Lucy.

CANADIAN MEDICAL ASSOCIATION.—The thirty-seventh annual meeting is to be held this year in Vancouver, B.C., on the 23rd, 24th, 25th and 26th of August, under the presidency of Dr. Simon J. Tunstall, of that city. Mr. Mayo Robson will be a guest of the Association.

THE Toronto Clinical Society, at its regular monthly meeting on the evening of January 6th, disposed of the following programme : Report of a Case of Prostatectomy (with specimen), Dr. George A. Bingham; Report of a Case of Perforation in Typhoid Fever, Dr. H. B. Anderson; Report of Plastic Operation on Thorax and Report of a Case of Syphilitic Tumor (with photos), Dr. Wm. Oldright ; The Pre-Typhoid Condition, Dr. R. D. Rudolph. Drs. J. T. Fotheringham and George Elliott were elected representatives to the Industrial Exhibition from the Society.

MR. WILFRID WESTERN, 6 Glen Road, Toronto, whose card appears in our advertising columns, has made for himself, in the short space of one year, an established reputation as a masseur. Trained in the Battle Creek Sanitarium, and having had experience for some time in the Boston Dispensary, he came to Toronto a little over a year ago, and has already done work under the supervision of several of the leading physicians of this city, which has been in the highest order most satisfactory. By those upon whom he has performed massage, he is looked upon as an expert, many testifying in words of the highest and warmest praise of his ability in his own particular line. The many complimentary testimonials he has in his possession, both from physicians and laymen, are indicative that he stands first-class in his profession.

**Prize Competition, See Pages 158 and xxxiv.**

# Dominion Medical Monthly

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## Original Articles

### VENTROFIXATION OF THE UTERUS WITH SUBSEQUENT NORMAL DELIVERIES.

By A. LAPTHORN SMITH, M.D.,

Surgeon-in-Chief Samaritan Hospital for Women, Montreal.

Having performed the operation of ventrofixation close upon two hundred and fifty times, and having almost invariably seen it followed by the most satisfactory results, I prefer this operation above all others in all cases of retroversion, or prolapse of the uterus accompanied by disease of the ovaries and tubes. If there is no disease of the ovaries and tubes present, and there are no adhesions, which prevent me from easily placing the uterus up, I invariably perform Alexander's operation of shortening the round ligament in all those cases which I have not been able to cure by non-operative procedures, extending over from three to six months, including the wearing of a pessary for most of that time. I think it wrong to open the abdomen, and perform ventrofixation on a woman whose ovaries and tubes are healthy, and whose displacement can be cured by an operation which has no mortality. If the woman has been complaining of pain for a long time, especially at her periods and during sexual intercourse, and if I am unable to get the uterus out of the hollow of the sacrum, I feel convinced that she has had pelvic peritonitis, and that she will have it again and again until the cause of the peritoneal infection has been removed. In

these cases I feel amply justified in running the risk of one or two per cent. in opening the abdomen, freeing the adhesions, and fastening the anterior surface of the uterus to the abdominal wall, after having first scarified the peritoneum to the extent of a twenty-five-cent piece, on the opposing surfaces. When I have made up my mind that the case is bad enough to justify the opening of the abdomen, I have generally found the condition of affairs to be much worse than I expected, and the saving of both ovaries and tubes was simply out of the question. When, however, the woman has been young, and desired me to leave one ovary, or even a part of one, and when she has asked me to leave a tube or a part of a tube, so that she might become pregnant, I have always done so, provided that she has expressed her willingness to take all the blame herself, and cast no reflection upon me, if the remaining pieces of ovary and tube should ever cause her so much suffering as to necessitate a second operation. In about ten cases they have come back expressing their regret that I did not remove all the diseased organs, and about five of these have had a second operation followed by a perfect cure. In about ten other cases they suffered no inconvenience from my having left the two ovaries, or one, or even the half of an ovary, their operation having turned out a complete success.

About five or six of them have had one or more children since, and in no case has there been a single untoward incident in connection with their delivery. No prolonged labors, no dystocia requiring the use of forceps, no Cesarian sections, no stillborn babies; the terrible pictures which I have seen so often painted in the medical journals as being the inevitable result of labor after ventrofixation were completely lacking. There was just a plain, ordinary, every-day confinement. None of them were confined by myself, but three were attended by Dr. Sylvester, one by Dr. Johnson, and another by Dr. J. Leslie Allan. This patient was admitted to the Samaritan Hospital for Women in March, 1902.

Mrs. R., age 27, married six years, and mother of two children, but during the last two or three years had been suffering constantly, especially during menstruation, which was irregular and profuse. The adhesions were so dense that in order to free them and to get the uterus up the tearing of them was unavoidable, and the ovaries were cystic and cirrhotic, being covered with a dense capsule. One ovary and tube were removed completely, and two-thirds of the other ovary, but one tube was allowed to remain. Dr. Allan states that her confinement on the

9th June, 1903, of a healthy female child, just fifteen months after ventrofixation, was perfectly normal.

Dr. Allan also sends me a report of another case, a Mrs. G., aged 25, married eight years. She always had been regular, but suffered a great deal. Before marriage and for six months after, the periods were very profuse. As no treatment seemed to benefit her, and she was becoming a chronic invalid, she was sent into hospital, and had curetting and ventrofixation, the ovary and tube on one side being removed completely, and a portion of the other one. Seventeen months afterwards she had a healthy female child, followed by a miscarriage, and after that two more healthy female children. On the 13th May, 1903, Dr. Allan confined her of a healthy ten-pound boy, the confinement being absolutely normal.

In my opinion all the disasters occurring in women who had ventrofixation, and who subsequently became pregnant, were due to the exceedingly faulty manner in which the operation was performed during its early years, the uterus being put upside down forwards, and fastened there with its back to the abdominal wall, so that the cervix pointed towards the liver. How could we expect a normal labor after such an operation? As I have already stated, the anterior surface of the fundus should be scarified, and it should be attached to the abdominal wall just above the pubis. If this were invariably done, we would hear no more of abnormal labors after ventrofixation.

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### A MEDICAL MEDLEY.\*

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BY J. S. SPRAGUE, M.D., STIRLING, ONT.

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This title I have selected in order to introduce many varied and important interests or suggestions, which, from an experience of more than thirty years in active practice, I have considered worthy to present to you—you who are baring your breasts and about to kiss the rod, in other words, preparing yourselves for admission as co-worker with us of the medical profession.

“A wise physician is more than armies to the public weal,”

\*Prepared by special request for the Student's Medical Society of Toronto University.

is a commendation of Homer, and the correctness of this beautiful illustration of our worth and of our services, has been confirmed in history, and really more judiciously applied to our confreres of this present period. If more than armies was he during that period in which Homer "struck his tuneful lyre," he assuredly is such to-day, and the future promises are that he will ever remain with such laurels of honor and usefulness.

When I, in 1866, was a medical student of this university, our quarters were in the Old King's College Buildings, and the only lecture we attended within these walls of the university was that of Chemistry—Dr. Croft the distinguished professor. If you, as students, were able to see us in our barracks (and such they were, or even worse) alone provided for us, you who are elegantly quartered would agree that time has made marked changes for the comfort and convenience of medical students. Such changes I have had the opportunity to observe, and duly confirm such as correct. Yet I cannot believe that men have arisen to equal my old teachers—Hodder, Bovell, Aikins, Richardson, Wright, and others who have left illustrious names and records in medicine. You, no doubt, will have the same adoration for your professors, and such esteem will be strengthened as the years roll by; yet it is well to observe, and to ever keep in remembrance, that the spirit of Chauvinism is not always commendable. Respect, even somewhat of adoration, should be, and will be cherished for one's *alma mater*, for the most precious of recollections for you will be those of to-day; in fact, for the whole period of your medical studies within these hallowed walls. These days no doubt appear to try your very souls, but the future with trials many, grievous, and disappointing, will assail you, yet not without days of sunshine and hopes for the morrow. Such trials or struggles, you with heart within and God o'erhead, will meet, for not only your personal honor, but that of the honorable profession, among whose members you soon will appear, will exact your best tributes. Medicine is a most jealous mistress—really "uncertain, coy, and hard to please," yet she will more than abundantly satisfy and reward those who give their whole heart and soul to her cause and honor. Among the knights and barons of England are twenty medical gentlemen, made so distinguished in recognition of their attainments in the healing art.

Koch, the discoverer of the bacillus of tuberculosis and Von Leyden have had nobility conferred on them by their sovereign. Rontgen is the possessor of the title of Baron; an army surgeon of the United States, for services rendered in Cuba during its

reconstruction, was given a commission as Brigadier-General. Such statements are made to illustrate that, although medicine has few gifts, yet they do exist, and await the giving to those who are faithful to her. Yet there are many men in our profession who, not ambitious of distinction or nobility, are doing patiently and zealously many acts of benevolence, and sustaining the good name of the profession in every sense, and worthy of meritorious service medals. While I venerate the labors and names of my teachers, really with that love which is that of a child for its parents, yet they never told us, in the words of Hufeland:

"Thine is a holy calling,  
See that thou exercise it purely,  
Not for thine own advancement only,  
Not for thine own glory, but for the glory of God,  
And the good of thy neighbor."

Did they, or my preceptor, ever instruct me in my obligations—my soon-to-be-assumed obligations towards my patients—or my patients to me, and to those of my profession? Did they ever mention or define any one of the many duties of physicians to each other? Did they ever name there was for our guidance or mutual protection an established set of rules entitled a "Code of Ethics"? My answer is, No! Have there been in the history of medical teachings any lectures, that is a well-arranged series of lectures on their mutual duties or obligations, such as are comprehended under the title or designation of medical ethics? The equivalent response No! must be given. No profession among all civilized nations demands more of intellect, soul and body, time and money, than does that of medicine, and if this statement be correct, which I think no one will be bold enough to deny, is it not but the right of every medical undergraduate in this or any university to demand and receive instruction in ethical matters? A few well-arranged lectures, or heart-to-heart talks to primary men are demanded, really necessary, but to the final-year men a well-arranged system of such talks or addresses delivered or prepared by men who are, or have been, thoroughly disciplined in country or city practice, would free you (and those who are to take your places here) from many silly notions. "There is a way which seemeth right to a man, but the end thereof is death." Such lectures, too, would free you from this termination, *i.e.*, professional disappointment.

It is wise for us to seek the good admonitions of our best men who have been over the roads, and whose years give weight

or stability to their expressions, but do not be in bondage to their faces or their varied fancies, for such subserviency makes many an honest mind its prisoner. Bacon has said, " Beware how in making the portraiture, thou breakest the pattern, for divinity maketh the love of ourselves the pattern; the love of our neighbors but the portraiture." No one ever became distinguished by following a model in character, although it is wise to have an ideal or model, yet one's personality should not be obliterated in the copy or in the copying.

There are fixed rules for our guidance, and such are contained in the code of medical ethics, as necessary to our professional daily life and venerable as are the ten commandments to civilized nations. You in your studies, having not had a preceptor as was required many years ago, have learned few—but very few, if any, of the ethical duties or obligations, and to your sorrow you will meet infringements of such in practice. The barrister and the clergyman enter their respective professions, thoroughly informed of their fraternal and public duties, and their code of morals or of ethics, either written or unwritten, is well established. Such an entrance to your professional career does not await you, yet I am of the opinion that those who are in the final studies will receive many lectures in ethics before graduation day. Our best medical journals are advocating such lectures, and our DOMINION MEDICAL JOURNAL says under the title of "The Teaching of Medical Ethics":

"The continuous and what we might call shameful neglect of our medical colleges in the matter of teaching medical ethics to the students, or more especially to the final men, is a subject which ought to call for serious and careful consideration at the hands of the medical faculties of the various teaching staffs of our universities. Too long has this matter been left in abeyance or perfunctorily performed by all too eager students themselves, inviting one of the members of faculty annually to give them a general idea of their comportment when once they have been launched into the profession. In these commercial days the young practitioner cannot be too well bolstered up in all that makes for an honorable and upright conduct. More especially has he need of correct information and understanding with regard to his duties to himself as a practitioner, to his patients, and to his confreres. No doubt those who would be looked upon as being qualified to deliver a series of lectures on such subjects, would plead that their attention to their professional and clinical duties already makes such inroads on their time, that

it would be impossible to add further thereto, and so this most important matter must continue to *drift, drift, DRIFT.* Some one in authority in the different medical faculties of the country might bring the idea to the attention of the students themselves through the medium of the president of their respective college medical societies, whereby arrangements could be made for a monthly deliverance from a given member of the faculty or several members thereof. If the code of ethics of the national medical organization, the Canadian Medical Association, were followed, a series of seven lectures could readily be arranged for on a monthly basis before the regular monthly meetings of these medical societies, at which now but a portion of the student-body foregathers. For instance, one member of the faculty might be asked to take Article I. of the code: 'Of the Duties of Physicians to their Patients, and of the Obligations of Patients to their Physician.' Another could be asked to deliver a second lecture, taking for his text, Article II.: 'Of the Duties of Physicians to each other, and to the Profession at Large,' and so on until the whole field would be covered. The result would tend to enhance the value of the medical society to each student, and would be sure to result in a very large and enthusiastic attendance at the regular meetings. This system, if once inaugurated in the college medical societies, would be productive of untold good in the after-life of the student when he has been called to the active and responsible duties of professional life. After these matters had been brought home to him in a proper manner for four years, he would step into the ranks a master of professional etiquette, and with a thorough knowledge of all that goes to make for success, and as well a valued member of the faculty."

Such views have, during the last few years, been published and highly endorsed by our best journals, yet our medical colleges in very few instances have relegated such considerations to medical societies among students.

Fame or success, it is true, is ascribable to accident in many instances which may be recalled, but it more frequently is due to "being in the right place at the right time, and doing the right thing, or better still, making people think you are doing the right thing." This is an accepted definition of fame or success, and it is useless "that thought may use unfettered wings" to more properly define it. In order that you may be prepared to win fame or achieve success, the highest qualifications, personal and acquired, are demanded of you to live and let live, and such should be your prominent thought. No other profession de-

mands more of its disciples than does medicine, and among such requirements it is well to note, you must be—

“Frank-faced, frank-eyed, frank-hearted, always bright,  
Bland as a Jesuit, sober as a hymn :  
Harmonious and yet without a touch of whim,  
Gentle and amiable, yet full of fight.”

Possessing or acquiring such characteristics will ensure you success, worth the struggle, for while rendering you more useful; they will, assisted by your thorough medical training, place you as a chief among equals—if not among the gods—in medicine. You will find “opportunities are fleeting, and the brethren deceptive,” and occasions will arise such as try men’s souls, in which you exclaim:

“Out of the night that circles me,  
Black as the pit from pole to pole :  
I thank whatever gods there be,  
For my unconquerable soul.”

But the morn waked, by circling hours, with rosy hand, will have unbarred the gate of light for you; lights and shadows will cross your path, and you will learn too soon that our profession has many irreconcilables and drones within its ranks, but the most deceptive and subtle foes to our stability and reputation are the borderland pharmaceutical houses and their agents, so says Osler in prophetic words. The pernicious literature of such establishments, re-echoed in many bastard journals, will ever remind you of insatiable camp followers or of howling wolves, relentless in pursuit of their victims. As such sappers and miners are within sight of our very foundations, the wonder is that they do not demand and endow a professor to expose or exhibit their so-called ethical goods, and give lectures on their virtues to you within these walls.

Unless your hearts are as Harveyized Krupp steel, it is hoped this “Medical Medley” has made some impression, or suggested beneficial thoughts, for with no wilful contrariety, or brilliant inaccurate reasoning have I found expression. It is free, entirely free from metaphysical subtleties and misapplied metaphors, just a brief, heart-to-heart talk, this and nothing more. It is a free-will offering, and I hope it will prove acceptable, and not worthy of the distinction of a burnt-offering. Such I leave to your decision in order that I arrange, with your wishes, another paper on this or some kindred subject, in which ethics as related to medical practice has a deserving consideration in the estima-

tion of all whose best love is that for the medical profession in its every and best interest; for "a house divided against itself shall surely fall," and those who are not with us in these heart-to-heart talks are surely against us.

" Since we deserved the name of friend,  
And thine effect so lives in me,"

I hope—

" A part of mine may live in thee  
And move thee on to noble ends."

No other motive than the above has influenced me in presenting this paper, *this* and *this* only, *this* and nothing more, and I hope—sincerely hope—that I, as Vice President of the Toronto University Alumni Society of the County of Hastings, an ordinary country doctor, have not addressed you in vain.

What is your decision?

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#### REPORT OF CASE OF SCALD.

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BY EVERETT S. HICKS, M.D., PORT DOVER, ONT.

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At noon, January 23rd, I saw a child, aged four years, who was scalded by falling into a tub of boiling water. The burn, which was of the third degree, was of irregular outline, as it involved: (1) an area on scalp and ear the size of a saucer; (2) one arm except the hand; (3) nearly one-half the trunk from shoulder to buttocks; (4) one leg from buttocks to knee. A glance at the temperature chart would show the history of a quick, short battle. The rise of temperature on January 24th was associated with convulsions, recurring at intervals. The burn was disregarded, and the child kept continually rolled in hot packs in an attempt to make the unburnt skin do double work. Chloroform and chloretone were given for the convulsions when they came on. The next day the baby was comatose; no pain, no crying, vomiting at times and involuntary movements from bowels and bladder. The unburnt skin now a deep scarlet. Hot packs were continued, and water given freely for four days.

January 28th.—Dressed scald with borated carron oil, ap-

plied on plain sterilized gauze. The rise of temperature, February 1st, was associated with separating sloughs; these were removed. February 2nd.—Skin was grafted on the elbow to avoid a stiffness of joint, if possible. In four weeks healing was nearly completed, and recovery, with good use of the arm, uninterrupted.

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## Selected Article

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### THE NERVOUS PHENOMENA ASSOCIATED WITH MOVABLE KIDNEY.\*

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BY WHARTON SINKLER, M.D., PHILADELPHIA.

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It is only within a comparatively recent period that the attention of the profession has been directed to the frequent occurrence of movable or floating kidney, and it is within a still more recent time that the importance of the symptoms arising from this condition has been appreciated. The frequency of movable kidney is a point on which there has been wide diversity of opinion. All authorities agree that movable kidney is much more common in women than in men, and it is also agreed that it most frequently occurs between the ages of twenty-five and forty years, and is rarely found in girls before puberty. It is also most common in women who have been pregnant. Some writers state that this condition of the kidneys is found in 25 per cent. of women who are examined for pelvic, dyspeptic or other troubles, while others regard the condition as comparatively rare. Franks<sup>1</sup> insists on a distinction between floating kidney and movable kidney. The former, he says, is very rare, and is a pathologic curiosity, while the latter is common. Floating kidney is a congenital condition, and the organ is freely movable in the cavity of the abdomen, it is surrounded by peritoneum, and is possessed of a mesonephron. Movable kidney is an

\*Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Richard Dewey, H. A. Tomlinson and F. W. Langdon.

1. Twentieth Century Practice of Medicine, vol. ix, p. 781.

acquired condition, and the organ is mobile behind the peritoneum.

When looked for in the cadaver, the kidney is not often found displaced, and this is probably due to post-mortem conditions, the kidney having a tendency to settle into its normal position, and the fatty capsule surrounding the organ becomes solidified, and helps to hold it there. Epstein states that movable kidney was found only five times in 3,658 post-mortems, and Landau, in an examination of hospital records from 1870 to 1879, found reports of only four cases out of 6,900. On the other hand, Lindner<sup>2</sup> asserts that in his experience, one out of every five women has a movable kidney, and Mathieu, out of 306 women examined in hospitals, found movable kidney in 85, or 25 per cent.

There is no doubt that a kidney which is displaced to only a slight extent is overlooked, and in the detection of a movable kidney, much depends upon the manner in which the examination is made. It is the experience of everyone to have found at one examination, that the kidney was so much out of place that its whole outline could be readily traced, while on the next occasion it may have been impossible to feel the organ at all. Lindner gives the following as his method of examination for displaced kidney: He stands at the right side of the recumbent patient, places his right hand against the anterior abdominal wall, and then presses the left against the back of the lumbar region so as to push the kidney forward. The patient is then placed on her right side, with the knees drawn up; by sharply shaking the body, the kidney, if movable, will fall forward. He says that frequent examinations are sometimes necessary to detect the abnormality.

Noble<sup>3</sup> declares that an examination of a patient lying down is a most unreliable way for determining the presence of movable kidney, and he believes that this condition is frequently overlooked if the examination is not made when the patient is standing. His method is as follows: "The patient's clothing should be loosened, all bands about the waist unfastened, and the skirts supported by a nurse or assistant, so that the patient will not be embarrassed with the fear that her clothing will fall off. She should then stand before a table or desk of convenient height, about thirty inches, with the examiner seated on her right. The patient then bends forward from the hips, and supports some of

2. Sajous' Annual, 1889, vol. I. G., p. 21.

3. Gaillard's Med. Jour., 1895, vol. lxi, pp. 59, 65.

her weight by resting her hands on the table. She is directed to respire regularly, care being taken to relax herself thoroughly during the expiration. The examiner's left hand is placed against the lumbar region posteriorly, and his right hand in a corresponding position in front of the kidney. By a conjoint manipulation, the region between the two hands can be carefully palpated, and if present, the kidney is easily recognized." The points to be looked after are the shape and size of the kidney and the fact that it can be readily displaced upward beneath the margin of the ribs, and that it will return to its former location as soon as the examiner's hands no longer support it. When the kidney is compressed, as a general rule, the patient complains of tenderness or pain of a peculiar character, and often makes the statement that the pain causes her to feel faint and somewhat nauseated. In some cases the manipulation will be more successful in the knee-elbow position.

The causes of displaced kidney have been variously assigned to falls, pregnancies and tight lacing, but it is probable that these conditions are only indirectly causative, as there must be some predisposition to displacement in order to effect a marked change in the position of the organ. Probably the most common predisposing cause is the lack or loss of adipose tissue. It is undoubtedly true that movable kidney is usually seen in women who are thin or emaciated. Possibly one reason for its more frequent detection in thin women is that in them it is easy to palpate the whole abdomen, while in stout women the difficulties are great, but it is no doubt true that movable kidney does not occur so frequently in stout women as in thin.

The kidney has no proper ligaments, but is embedded in a thick cushion of fat which aids in keeping the kidney in place, and there is also a large amount of connective tissue which binds it to the loin behind and to the abdominal viscera in front. Anything which causes absorption of the fat will necessarily allow greater mobility to the kidney. The right kidney is much more frequently displaced than the left, although occasionally it is found that both kidneys are displaced. Schutze found in 73 cases, the right kidney displaced 65 times—the left 18, and in both 14 times. Noble says that he has never seen a case in which the left kidney was displaced independently of the right.

The symptoms of movable kidney are for the great part reflex in character, but there are also those which are local or due to mechanical action. The principal symptoms connected with displaced kidney are pain and dyspeptic and neurasthenic disor-

ders. It is interesting to note that the symptoms are by no means in proportion to the degree of displacement of the organ. It frequently occurs that in cases where the displacement is only slight, the reflex symptoms are most marked. Noble has called attention to this and also to the fact that in this it is analogous to pelvic disorders. He thinks that the explanation is that in extreme displacement the nerves become overstretched, and the circulation has had time to adjust itself to the changed condition.

The degree of pain varies from a dull aching to acute lancinating pain. It is usually referred directly to the region of the kidney, and is more or less constant. In many cases it is uncomfortable or painful for the patient to lie on the side opposite the displaced organ. If there should be a twist or kink of any kind in the ureter, this will give rise to intense pain and eventually to hydronephrosis. Should complete rotation of the kidney occur, not only is the ureter compressed, but the renal vessels and nerves are also involved. The result is agonizing pain, with collapse, nausea, cold sweats and scanty urination. In short, most of the symptoms of renal colic are present.

Neuralgic pains in different parts of the body are complained of. Irritable bladder is common, and so also is pain in this organ, which begins in the kidney and passes down the ureter into the bladder. Dysmenorrhea is frequently associated with movable kidney, and there are also symptoms referred to the ovaries and bladder of a dragging character or weight, which are really due to a displaced kidney. There are frequent disturbances of the liver and gall bladder as a result of mechanical dragging by the kidney, and symptoms closely resembling those of gallstones are not unusual in connection with movable kidney. Dyspeptic symptoms are almost constantly met with in cases of displaced kidney. They may vary in degree and kind from slight indigestion and flatulence to intense nausea and pain. In connection with gastric disturbances are found palpitation of the heart and other disturbances in the action of this organ.

Intestinal disorders are also common. In some cases there is marked mucous colitis with its distressing local and general symptoms. What are popularly called bilious attacks frequently occur in patients with movable kidney. In these attacks there are headache and vomiting of large quantities of bile-stained mucus. The gastric symptoms have been attributed by one writer to the direction of the displaced kidney, and the pressure of this organ on the stomach, but this is hardly a satisfactory

solution of the case. It is more likely that the gastro-intestinal symptoms are reflex rather than mechanical.

A recent writer, Dr. Sherman Thompson Brown,<sup>4</sup> has reported two instructive cases of pancreatic diabetes, which he believes were due to misplaced right kidney. In both cases nephropexy was performed. Both patients made an uninterrupted recovery, and from the time of the operation no sugar was present in the urine in either case. In the interesting article which this writer has presented, he goes fully into the anatomy of the pancreas, duodenum and kidney. He explains the intestinal and pancreatic disturbances in displaced kidney by the pulling upon the duodenum and the colon with the duodenum where it crosses the kidney, and the pressure of the misplaced organ. In his cases, he believes that the glycosuria was due to dragging on the pancreas by the kidney.

Edebohls<sup>5</sup> believes that movable or displaced right kidney is directly responsible for almost every case of appendicitis. He, as is well known, is a strong advocate for operations to anchor the kidney. It would seem, therefore, that movable right kidney is held responsible for nearly all the ills to which flesh is heir.

The most common symptoms associated with movable kidney are disorders of the nervous system, such as hysteria, neurasthenia and mental depression. It must be borne in mind, however, that at least 50 per cent. of the cases of movable kidney present no symptoms whatever, and that, therefore, we can not expect to find in every neurasthenic woman a displaced kidney. At the same time there is such marked causative relation between movable kidney and neurasthenia that it behoves us to examine every woman presenting neurasthenic or hysteria symptoms, for the position of the kidneys. It is not necessarily the case that there is severe pain complained of in connection with the nervous systems, for frequently it is found that a neurasthenic woman has not experienced any pain or discomfort in the region of the kidney, nor has she been aware of any mal-position of the organ.

Probably the most constant nervous disorder in a patient with displaced kidney is neurasthenia. Such patients are thin and, in addition to general neurasthenic symptoms, suffer from much gastric disorder. There are, in some cases, attacks of severe epigastric pain, with retching like the gastric crises of tabes, and often there is gastric pain which comes with regularity

4. Phila. Med. Jour., April 4, 1903, p. 594.

5. Amer. Jour. of Obstet., 1895, vol. xxx, p. 161.

one or two hours after eating, and large quantities of gas are belched up simulating gastric ulcer. The usual remedies for indigestion and flatulence afford little or no relief. Some patients find that lying down and kneading the right side gives ease. Bloating from distension of the bowels with gas is a common symptom, and this is frequently accompanied with palpitation of the heart and pain in the precordia. These patients, also, have more or less pain in the region of the affected kidney, which is generally of a dull aching character, and is often attributed to intestinal disturbances. The patient sleeps badly, and the sleep is broken and disturbed by dreams. Any form of exercise, even walking or driving, is liable to cause pain and aching in the right hypochondrium and considerable exhaustion. Patients with movable kidney are also extremely nervous and irritable, and are often in a condition which makes them not only uncomfortable to themselves, but a burden to their friends. In some cases, the various manifestations of hysteria may be presented. I recall one patient whose right kidney was so much displaced that it could be readily outlined in the region of the umbilicus, who had severe hysterical seizures in which she became unconscious and raved.

There are various reflex hysterical disturbances met with in movable kidney. Of course, there may be only an accidental association between these conditions, but from the fact that after an operation for fixation of the kidney these symptoms disappear, it is evident that there is more than a coincidence between the symptoms.

Hypochondriasis and mild mental disturbances like melancholia, are sometimes associated with movable kidney, but these conditions occur only in cases of long standing.

These nervous phenomena rarely occur in men, but when they are met with in that sex they are very intense. The treatment of movable kidney is palliative or radical. In a certain proportion of cases, the application of abdominal belts with properly adjusted pads seems to afford relief, but in the majority of instances the use of any kind of apparatus is entirely unsatisfactory, as it is most difficult to get a belt which can be made to fit accurately. Many cases in which the amount of displacement is moderate in degree, are greatly benefited by the rest treatment, and even cases in which there is a considerable displacement of the organ are distinctly benefited by such a plan of treatment. Every case of displaced kidney should have the benefit of systematic and intelligently directed rest treatment before resorting to operation. All the procedures connected with the rest treat-

ment tend to benefit cases with movable kidney. As long as a patient is on her back the kidney remains in a normal position. By improving the general nutrition of the body, the weight is increased, and this will add to the deposit of fat in all the tissues and restore that which has been lost by absorption from the envelope of the kidney, and thus secure it in its proper condition.

In addition to these mechanical influences from rest treatment, the isolation, regimen and moral influences which are brought to bear on the patient, relieve the nervous and neurasthenic symptoms which are present, in almost every instance.

In cases in which there is true floating kidney, or much displacement of the organ, and in which the rest treatment has been faithfully tried without benefit, operation should be resorted to. There are also cases in which, for various reasons, it may be undesirable to adopt rest treatment, and in these, nephroorrhaphy may be resorted to at once. The operation has been performed in various ways by different operators. The five principal methods are as follows:

1. The sutures may be passed through the fatty capsule alone.
2. They may be passed through the fibrous capsule of the kidney.
3. They may be passed through the substance of the kidney itself.
4. The capsule may be split and dissected off and this stitched to the lumbar muscles.
5. The substitution of gauze packing for sutures to hold the kidney in place until the formation of permanent adhesion of the kidney in its new position, the wound being left open to heal by granulation.

The object in all of these is to fix the kidney in the loin. The operation has now been performed a great number of times with marked success as to retaining the organ in position. The mortality is exceedingly small. In 134 cases collected by Keen,<sup>6</sup> there were four deaths, giving a death-rate of 2.98 per cent. The experience of most operators has been that the kidney remains in position after it has once been fixed by operation. Edebohl states that in 193 operations upon 186 patients, in none of the cases did he find the kidney misplaced on subsequent examination. Henry Morris states that in 98 operations for movable kidney, he has not reoperated on a single patient.

The ultimate results of nephroorrhaphy as regards the symp-

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6. Trans. Amer. Surg. Assn., 1890.

ptoms, depend to a considerable extent on the nature of the case. The pain, weight and dragging is almost invariably relieved by an operation. The immediate effect on disorders of the digestive system is not always satisfactory, and it often is a considerable length of time after the operation before these symptoms are relieved. Flatulent dyspepsia and constipation often remain for a long time, and the same may be said of the nervous phenomena. Few cases are immediately relieved of neurasthenic and hysterical symptoms immediately after operation, and it is not reasonable to expect that these symptoms will be relieved without suitable treatment being pursued for a reasonable length of time. It is, in operations for movable kidney, just as it is in operations for ovarian disease in patients who have become neurasthenic. The cause of the trouble may have been removed, but the disease which has been induced does not disappear without proper treatment.

I will only relate two cases to illustrate what has been dwelt on in the foregoing remarks.

Case 1.—Mrs. A., aged 40, mother of four children, has for several years suffered from a number of symptoms of neurasthenia. She has had flatulent dyspepsia, and suffered from constipation. She has been very nervous and has become unable to perform her duties at home. She has lost much flesh, and is far below her normal weight. The right kidney was found to be markedly displaced, and could be readily outlined. There is apparently little local pain. She was treated systematically by the rest cure, and gained flesh, and lost her neurasthenic symptoms. Fifteen years later she was seen, and stated that she remained in excellent health.

Case 2.—Mrs. B., aged 25, has for several years suffered from severe attacks of bilious vomiting associated with headaches and pains in the right hypochondrium. She has been neurasthenic, irritable and emotional. She has constant dragging pain on the right side of the abdomen, most marked just below the margin of the ribs. She had frequent attacks of mucous enteritis. The right kidney was found to be movable and readily outlined. The patient was thin, but not anemic. A course of rest treatment was followed by improvement in her general symptoms, but after a few months she had almost as much pain, and suffered from as frequent attacks of bilious vomiting as before. In September, 1902, she was operated on by Dr. John B. Deaver, and the kidney was fixed in position. She made a satisfactory recovery from the operation, and all her symptoms have gradually disappeared. She has gained flesh,

and has comparatively little trouble with her digestion, and while not entirely free from pain, has so much less that it gives her but little inconvenience. She has gained markedly in weight.

#### DISCUSSION.

Dr. A. P. Ohlmacher, Gallipolis, Ohio—Dr. Sinkler has referred to the difference between the figures of the pathologist and those of the clinician as to the frequency with which movable kidney is met. This discrepancy is, perhaps, partly due to the fact that it is not the routine custom to look for this anomaly in making an autopsy. The displacement is usually best made out with the body in the recumbent position, but if the autopsy is not made immediately after death, the fixation of the tissues tends to anchor the kidney, as well as the other intraperitoneal contents. If one will take the pains to grasp the kidney in its peritoneal covering, it will frequently be found that the range of movement varies greatly, and in this way one can sometimes detect a movable kidney. My attention has frequently been called to this in cases where the mesentery was unusually long and associated with a displaced stomach and colon, and on examining the kidney it would be found in its normal position, but it could be very readily drawn out and sometimes displaced for a considerable distance. I was rather surprised that Dr. Sinkler has laid no stress on the association of movable kidney with movability of other abdominal organs, that is, to a splanchnoptosis. This association is so common that I am sure it deserves some consideration. The digestive symptoms to which he referred are frequently the result of an associated gastrophtosis, and are not referable to the kidney condition proper. In a like way the intestinal symptoms are often referable to displacement of the colon.

Dr. R. C. Moore, Omaha—The number of cases of movable kidney that we come across in general practice is astonishing, and it has become my custom when I am called to see a patient who has any symptoms pointing to the abdomen, to invariably look for floating kidney. The general symptoms, as Dr. Sinkler has described them, do not point to any disorder of the pelvic organs, but more especially to the gastro-intestinal tract. The author also referred to the connection of appendicitis with this trouble. This form of appendicitis comes under the head of colic of the appendix, and an operation on the movable kidney will not cure the trouble in the appendix. After the kidney is anchored, it becomes necessary to perform a second operation on

the appendix. These cases of appendicitis are non-suppurative in character at the outset, but there is a constant danger that infection may take place. In examining for movable kidney, the upright position allows it to fall forward, but it is often very difficult to move it out on account of the rigidity of the abdominal walls. My custom is to have the patient sit on a chair and bend forward so that the abdominal muscles become relaxed. If the kidney is displaced, it can usually be made out by examining in this position.

Dr. J. L. Miller, Chicago—In quite a large percentage of cases of movable kidney of the second or third degree we also find gastrophtosis. The latter condition does not always give rise to gastric symptoms. Many of these patients have shown marked improvement on the application of a suitable bandage; in others, an operation was necessary. Before we can say that these patients are cured, it is necessary to keep them under observation for a long time, as relapses are not uncommon. The neurasthenic symptoms will be apt to return even if the kidney has been restored to its proper position. The beneficial results of the treatment, as far as the nervous symptoms are concerned, are, I believe, largely due to suggestion.

Dr. A. R. Elliott, Chicago—I have been astonished at the frequency with which I have found gastrophtosis and enterophtosis associated with movable kidney. These patients sometimes fall into the hands of the gynecologist, who may, perhaps, find and repair an old rupture of the perineum without relieving any of the patient's abdominal symptoms, which are the result of an abdominal ptosis. A satisfactory abdominal support and measures directed toward a proper regulation of the digestive functions with promotion of the general muscular tone, give the best results in these cases.

Dr. A. C. Croftan, Chicago—I think it is difficult to determine whether floating kidney is ever the cause of neurasthenic symptoms. I have never seen such a patient cured by the replacement of the kidney alone. There is usually in these cases general abdominal ptosis, and often associated with this condition is a loose floating twelfth rib. Whether the neurasthenia and the relaxation of all the abdominal supports are both effects of the same cause, or whether the latter determines the former, is often difficult to say. Theoretically, one might imagine that splanchnoptosis, with the resulting derangements of function, might cause certain vague general symptoms that can be conveniently included under the gaping category of neurasthenia; sympathetic irritation may also possibly be incriminated. The

anchoring of a loose kidney or uterus, however, can hardly be expected to cure the patient. I certainly never hesitate to send my neurasthenics to the abdominal surgeon even if the kidneys were loose.

Dr. F. Savary Pearce, Philadelphia—I believe that in a great many cases of floating kidney, associated with general splanchnoptosis, the whole process is the result of depressed vitality in a neuropathic subject. The treatment should be directed first along neurologic lines—to repair the nervous system, and when the patient's general condition is improved, it is certainly advisable to put the organs back into their proper places. As to the gastro-intestinal symptoms being necessarily due to an associated gastropetrosis or enteroptosis, I am not willing to subscribe to that theory, because I have seen two cases of undoubted floating kidney with marked gastro-intestinal symptoms, in which there was no displacement of the stomach or bowels. The gastric symptoms, under such circumstances, are probably at least partially of reflex origin, or they may be the result of a nervous dyspepsia. The ideal treatment is to remedy the nervous condition. I have never found much benefit from the use of a belt.

—*J. A. M. A.*

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The important factors in attaining a good old age are good parentage; moderate, mixed diet, with the amount of meat reduced to a minimum, and alcoholic beverages entirely excluded or limited to a small amount of beer or wine taken with the meals, moderate bathing, outdoor exercise, intellectual work, rest for one or three months' during the year, and the cultivation of a cheerful, hopeful spirit. Worry should have no place in our lives.—*Merck's Archives*.

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It is now recognized that tuberculosis of the faucial tonsils instead of being, as was formerly supposed, a disease of great rarity, is one of comparative frequency. Owing to the difficulty of recognizing the disease by the naked eye, its diagnosis and frequency can be ascertained only by the aid of the microscope and by inoculation experiments. Friedman, out of 145 post-mortem and operation cases, found evidence of tubercle 17 times, 12 of these being cases primary in the tonsil.—*L. Kingsford, in The Lancet*.

## Reports of Societies

### ONTARIO MEDICAL ASSOCIATION.

The coming meeting of the Ontario Medical Association promises to be the "best yet," if the earnest manner in which the newly-appointed members of the Committee on Papers have assumed office is any augury of success. The Committee hopes to be in a position before long to indicate to the profession at large the names of prominent visitors who will be here to take part at the meeting, June 14-16th.

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### CANADIAN MEDICAL PROTECTIVE ASSOCIATION ANNUAL STATEMENT.

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The annual statement to the meeting held at London, Ontario, during the recent session of the Canadian Medical Association, showed that while the membership increased slightly last year, yet we are far short of our expectations of success as a vigorous society, and we have determined once more to make an effort to arouse our brethren to a sense of the importance of our undertaking.

In every instance that we have undertaken to defend one of our members in the courts we have succeeded, but as it has been pointed out again and again, the legal expenses are heavy, and though we have won, the costs have had to be met inasmuch as the plaintiffs were sheriff-proof and worth nothing. Since our organization we have paid out in this way \$1,026. Our exchequer is now practically empty, as we owe our bank balance to our solicitors. Our recent successful suit in defending Dr. Watts, at the Cornwall Assizes, has brought us in a further bill of costs of \$250 which must be met in all fairness to Dr. Watts, and while we are appealing for assistance to the profession at large, we are notified of another writ at Gananoque, where one of our members is sued for damages for a case of death from tetanus following a vaccination. If our good work of assisting a brother attacked for malpractice is to go on we must look to the general profession to join us and, by their annual fee, put the executive in a position to defend. This appeal is urgent, and while January 1st is the date upon which we expect men to join,

we are compelled to ask for the 1904 fees now. Everywhere an occasion offers we are encouraged by promises of support to go on, and we realize that it is thoughtlessness only that keeps our list so small.

We confidently look for a greatly increased list of members this year, otherwise we will be obliged to cease our existence as the executive cannot be expected to make themselves personally liable for legal expenses.

We appeal to you not to compel us to circularize the profession twice in one year, as it costs nearly \$100 to do so. Fill in your application forms when you read this, and forward it together with \$2.50 in the enclosed envelope. If each member will interest himself in his own circle of friends, and secure their co-operation, he will do much to preserve our Association intact and prevent its lapsing from inanition.

We append the Treasurer's Statement and a comparative statement of membership by Provinces during the past two years:

#### RECEIPTS.

Balance in bank, January, 1903 .....	\$145 17
Ontario, 139 members .....	347 25
Quebec, 35 members .....	87 25
Nova Scotia, 17 members .....	42 50
New Brunswick, 14 members .....	35 00
Manitoba, 10 members .....	25 00
North W. T., 10 members .....	25 00
British Columbia, 28 members .....	70 00
Accrued interest .....	3 75
	<hr/>
	\$780 92

#### DISBURSEMENTS.

Legal expenses .....	\$373 72
Printing and stationery .....	91 25
Postage stamps .....	60 25
Clerical assistance in re circulars .....	28 50
Auditor and bookkeeper .....	26 00
Travelling expenses .....	25 00
Bank charges on cheques .....	6 45
Cash on hand .....	169 75
	<hr/>
	\$780 92

N.B.—Outstanding liability to solicitors, \$172.95.

J. A. GRANT, JR., *Treasurer.*  
G. S. DAVISON, *Auditor.*

## COMPARATIVE STATEMENT.

	Members.	1902	1903
Ontario	127	139	
Quebec,	28	35	
Nova Scotia	19	17	
New Brunswick,	14	13	
Manitoba,	13	10	
N.-W. Territories,	4	10	
British Columbia,	14	28	
P. E. Island,	2	0	

F. W. MCKINNON, *Secretary.*

R. W. POWELL, *President.*

Ottawa, November 25th, 1903.

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## Therapeutics.

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### The Fly Blister and How to Apply It.

The following suggestions concerning the employment of the fly blister, an agent too often overlooked in these days of hyper-elegant pharmacy, are contained in an editorial in the *Medical World*:

"The fly blister is of value for four purposes: to affect inflammation or congestion; to cause absorption or removal of inflammatory deposits after inflammation has ceased; to relieve pain; for the effect which can be exerted upon the general system by blisters in systemic disease.

"When used to affect inflammation, the blister should not be applied over the site of inflammation, but should be placed a little to one side or at some other point known to be intimately connected by nerve fibres with the seat of inflammation; thus, in inflammation about the eye, the blister is applied back of the ear; and in pleurisy or abdominal neuralgia the chosen site of application is over the vertebra where the nerve at fault makes exit. Remember that all nerve pain is referred to the peripheral end, and *not* to the point of origin. In beginning hip-disease, it would be useless to apply a blister to the knee or ankle complained of, but great effect is often secured by applying it over the proper place in the affected hip. *A fly blister should never be placed directly over the site of an acute inflammation;* when it is to be used in such cases, apply it in a circle around the inflamed area, at

a little distance. The fly blister does good service in inflammation of the brain, eye pleura, peritoneum, lung, joint (rheumatic or traumatic), glands, urethra (gleet), etc. The old view, that fever was a contraindication to blistering, has faded away. One exception should be made in the rule of locating the blister; in peritonitis apply it directly over the seat of pain. In gleet, the cantharidal collodion may be substituted for the blister, and used by painting along the under side of the penis and on the perineum.

"To remove the results of inflammation, such as pleurisy with effusion, the fly blister is extremely valuable; in such cases apply it under the arm about two or three inches below the axilla. In old effusions about joints, the blister often succeeds where other means have failed.

"The indications for the relief of pain will be plain to all. It is only in chronic pain that the blister is proper, and such rubefacients as mustard plasters generally do fully as well and do not leave such an amount of tenderness.

"To get systemic effect one must study each individual case before applying the blister. In meningitis, apply in 'T' shape to the back of the neck; in intercostal neuralgia and zoster, to one side of the spinal column; in renal irritation, between the kidneys over the spine, etc.

"As the blister begins to form, remove the fly blister and apply a warm poultice; this relieves the pain and hastens the process. If the blisters are small, they may be allowed to rupture spontaneously, but if large they should be punctured at the most dependent part and dressed with sweet oil or simple ointment carbolized in the proportion of 1-100."—*Medical Standard*.

#### A Modification of Two Classical Arsenical Preparations.

M. Danlos (*Rev. franc. de Med. et de Chir.; Centralbl. f. d. ges. Therapie*, No. 12, 1903).—In general, larger quantities of arsenic are borne by the organism when given in the form of "Asiatic pills" than when given as Fowler's solution. The only objection to the former lies in the fact that old, hard Asiatic pills may sometimes pass through the digestive tract without being disintegrated. Instead, therefore, of the usual formula of the French pharmacopeia:

B.	Acid arsenios.....	0.5
	Pulver. nigr.....	5.0
	Gummi arab.....	1.0
	Aq. q. s., m. f. pilul. No. C.	

The writer prescribes:

R.	Acid arsenios .....	0.5
	Glycerini .....	3.0
	Pulv. nigr. porphyris .....	5.0
	Pulv. gentian, q. s. u. f. pilul. No. C.	

This formula has the following advantages: (1) The arsenic being dissolved in glycerine is finely divided; (2) The same reason lessens its irritative effect on the mucous membranes; (3) the pills remain fresh a long time.—*Interstate Med. Jour.*

#### Boils.

R.	Alumini acetatis .....	ʒij.
	Aq. dest. ....	fl. ʒiv.

M. Sig. Apply constantly on absorbent cotton saturated with the lotion.

Indication.—Used in papular stage to abort.—*Ex.*

#### Pertussis.

The following combinations, recommended by *Jour. des Pract.*, are of value in the treatment of whooping cough:

R.	Pulv. belladonnæ rad. ....	gr. 1/20.
	Pulv. sacchari ....	ʒi.

M. Ft. chart No. viii. Sig.: Two powders daily; or:

R.	Atropinæ sulph. ....	gr. 1 100.
	Aqua destil. ....	ʒvi.

M. Sig.: One dessertspoonful at a dose and repeat in three or four hours, watching the effects carefully; or:

R.	Bromoform .....	iii. xlviij.
	Alcoholis .....	ʒiss.
	Aq. laurocerasi .....	ʒi.
	Aq. destil. ....	ʒiv.

M. Sig.: One teaspoonful four times daily; or:

R.	Bromoform .....	iii. xlviij.
	Olei amygdale dulcis .....	ʒss.
	Pulv. acacie, aa .....	ʒi.
	Aq. laurocerasi .....	ʒi.
	Aq. destil. q. s. ad .....	ʒiv.

M. Sig.: One teaspoonful three or four times daily.

(When administering bromoform the effects must be carefully watched on account of its tendency in some cases to produce depressing effects.)

**Treatment of Cancer by Caustic Pastes.**

Dr. Charles W. Allen believes that in caustic pastes we have a valuable method for treating superficial cancers. He prepares his arsenical paste with orthoform, the analgesic qualities of which exert their influence *pari passu* with the painful effects of the arsenic on the tissues and the nerves. His conclusions are:

1. Cutaneous cancer is traceable in almost all cases to preceding local irritation.
2. There may be other causes, but infection is probably a source of the disease.
3. Benign epitheliomatous proliferation may be infectious.
4. Cancer is curable, but if the disease is allowed to progress the patient may not be.
5. Only the most radical treatment is to be tolerated.
6. Caustic paste, with subsequent caustic dressing, is radical, and is often preferable to the knife.
7. The earlier cancer is treated the less likelihood is there of relapses or metastases.
8. The X-ray bids fair to be as effective as caustics.

The fact that caustic pastes are abused by many charlatans in improper cases should not prevent the conscientious physician from trying the method in proper cases.—*Med. Record.*

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**Use of Fruits.**

Lemons are very useful in health and sickness. Hot lemonade is one of the best remedies for an incipient cold. It is also excellent in cases of biliousness. For malaria, the "Roman cure" is prepared by cutting the rind and pulp of a lemon into a pint of water, then boiling until there is only a half-pint. One teaspoonful is taken before each meal. This has cured obstinate cases when quinine failed.

Lemon syrup made by baking a lemon twenty minutes, and then squeezing the juice upon half a cupful of sugar is excellent for hoarseness and to break up a cold.—*Dietetic and Hygienic Gazette.*

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**Salicylates in Chorea.**

Of course there is nothing new in the statement that chorea is the rheumatism of childhood, but the corollary to this, that the salicylates are indicated in chorea, has not been applied. It is claimed, however, that the salicylates are more useful in the

treatment of this condition than is arsenic. It is claimed by a few observers, that from forty to sixty grains per day will show decidedly favorable results. We should like our readers to give this matter their practical consideration, with a view to reporting results.—*Med. Council.*

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#### Treatment of Asthma in Children.

According to the *Rev. de Therap.*, belladonna is still the best remedy for the above trouble. One pill a day is recommended, consisting of 1-6 grn. of extract of belladonna. The following is also a good formula:

Fld. Ext. Grindelia,	
Tinct. Lobelia, of each .....	16 min.
Tinct. Pulsatilla .....	30 min.
Syrup Orange Flowers.....	10 drams.
Linden Flower Water .....	2 oz.

To be taken in one or two days.

In the intervals the iodides should be administered. Arsenic, potassium bromide, sulphur, and lobelia are also considered useful for prolonged constitutional treatment. The following is a useful formula:

Sodium Arsenate.....	½ grn.
Potassium Iodide,	
Potassium Bromide, of each .....	30 grn.
Tinct. Lobelia ..	30 min.
Syrup Orange Flowers,	
Linden Flower Water, of each .....	2 oz.

Teaspoonful three times a day.

—*Merck's Archives.*

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#### Treatment of Migraine.

The writer gives an outline of the treatment which he has employed with success for ten years. Medicinal treatment should be continuous, and not limited to the period of the attacks. For this reason medicine must be palatable or it will be discontinued. A prescription to be recommended is:

Sodium sulphate .....	30 grains.
Sodium salicylate .....	10 grains.
Magnesia sulphate.....	50 grains.
Lithium benzoate .....	5 grains.
Tincture of nux vomica .....	3 drops.
Water to .....	4 ounces.

The drugs in the above proportions are made up in syphons charged with carbonic acid gas, and from quarter to half a glass

is taken every morning before breakfast. The use of the above formula gives far better results than the separate use of the various medicines which it contains. Sodium salicylate is the most important ingredient. The medicine may be taken regularly during the winter and discontinued during the summer unless symptoms recur. If attacks come during the early stages of the above treatment, cannabis indica, one quarter grain two or three times a day should be tried. Mercury, in the form of some calomel preparation, is of use, especially in children. When attacks are very severe the following may be given:

Caffeine citrate .....	2 grains.
Antipyrin.....	10 grains.
Potassium bromide.....	30 grains.

This powder may be dissolved in half a glass of water. Apart from medicine, exercise and moderate eating are most called for in the treatment of migraine.—*Medical Chronicle*.

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Let us cultivate the gift of taciturnity and consume our own smoke with an extra draught of work, so that those about us may not be troubled with the dust and soot of our complaints.—*Osler*.

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I do not think that any patient the subject of hernia, says John B. Deaver (*International Journal of Surgery*) should wear a truss, excepting in the presence of a certain few contra-indications to operation. As an hospital surgeon of twenty-five years' experience, I have seen many deaths from strangulated hernia, nearly, if not all of which could have been prevented had a timely operation been performed. The exceptions to the radical cure that I would make are : 1. In children under the age of four, in the hope that time would remedy the defect in the abdominal wall. I do not agree with Dr. Coley, however, that probably two-thirds of these children are cured by a truss. I believe the percentage, of course, is much less; two-fifths, perhaps. 2. In adults the subject of serious organic lesions of the heart, lung or kidneys, or in those very fat individuals where the intestine and omentum are adherent to the sac. 3. In adults over sixty years of age when the hernia can be held in place by a truss.

## The Physician's Library

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*Howe's Handbook of Parliamentary Usage.* Arranged for the Instant Use of Legislative and Mass Meetings, Clubs and Fraternal Orders, Teachers, Students, Workingmen, and all who desire to conduct themselves "decently and in order" in public assemblies. By FRANK WILLIAM HOWE. 50c., postpaid. New York: Hinds and Noble, Publishers, 31-33-35 West Fifteenth Street, New York.

This is an uniquely gotten up little volume for the purposes as set forth above. By opening the book at the middle, its ingenuity and utility instantly appear. Every motion is right before the eye, and the details on the page right there. It will prove an exceptionally fine reference for chairmen, presidents, secretaries of societies, etc.

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*A Reference Handbook of the Medical Sciences.* Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By various writers. A new edition, completely revised and re-written. Edited by ALBERT H. BUCK, M.D., New York City. Vol. VII. Illustrated by chromolithographs and six hundred and eighty-eight half-tone and wood engravings. New York: William Wood & Company.

The opening subject in this, the seventh volume of "The Reference Handbook of the Medical Sciences," treats of saccharin, or gluside, and is by a well-known Canadian writer on pharmacology, Dr. H. Beaumont Small, of Ottawa. Amongst other Canadians contributing to this volume we notice the names of Buller, Fry, Martin, Morrow, Nicholls and Oldright, and two Toronto graduates, Barker and Bensley. If one were asked to nominate the leading features of "The Reference Handbook," we believe we would be compelled to say, its comprehensiveness and magnificence. The articles we have read are particularly good. The chapter on the spinal cord is exceedingly good, and is written by a Canadian graduate, who has made for himself a name in the medical world. Spinal cord diseases is another section particularly good in this volume. In short, in a work which stands in the front rank it is to be expected that the editor

would spare no pains to secure the very best talent available. No medical library can be complete without "The Reference Handbook of the Medical Sciences."

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*The Self-Cure of Consumption without Medicine.* With a Chapter on the Prevention of Consumption and other Diseases. By CHARLES H. STANLEY DAVIS, M.D., Ph.D., Member of the Connecticut State Medical Society; Physician to the Curtis Home for Old Ladies and Children; Author of "The Training and Education of Feeble-Minded, Imbecile and Idiotic Children," etc., etc. Price 75c. 1904. New York: E. B. Treat & Co.

As the author states, the object of this book is to show how consumption in its first stages, in fact before actual decay of the lungs takes place, can, in 95 per cent. of the cases, be cured. He considers that this is the great economic problem of the twentieth century, and, indeed, it is a most vital question to the welfare of any community. There is an appendix, entitled "Prevention of Consumption and Other Diseases." The book is intelligently written, and treats the subject in all its aspects.

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*Infant-Feeding in its Relation to Health and Disease.* A Modern Book on all Methods of Feeding. For Students, Practitioners, and Nurses. By LOUIS FISCHER, M.D., Visiting Physician to the Willard Parker and Riverside Hospitals, of New York City; Attending Physician to the Children's Service of the New York German Poliklinik; Former Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital; Fellow of the New York Academy of Medicine, etc. Third edition, thoroughly revised and largely re-written. Containing 54 illustrations, with 24 charts and tables, mostly original. 357 pages. 5 3-4 by 8 3-4 inches. Neatly bound in extra cloth. Price, \$2.00, net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

This, the third edition of an eminently practical work on a somewhat difficult problem, at least at times, has been completely brought up to date with present-day conceptions of infant-feeding. There is an entire new chapter on "Milk Idiosyncrasies

in Children," another new chapter on "Buttermilk Feeding," one on "Scurvy," and one on "Feeding Children Afflicted with Cleft Palate." These all enhance the value of the book. In addition, the dietary for older children has been enlarged, and the method of feeding in diphtheria re-written. We believe the work is such as to commend it to every man in general practice; a valuable Dietary completes the volume, which altogether abounds in good practical suggestions.

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*The Blues (Splanchnic Neurasthenia). Causes and Cure.* By ALBERT ABRAMS, A.M., M.D. (Heidelberg), F.R.M.S.; Consulting Physician, Denver National Hospital for Consumptives, the Mount Zion and the French Hospitals, San Francisco; President of the Emanuel Sisterhood Polyclinic; formerly Professor of Pathology and Director of the Medical Clinic, Cooper Medical College, San Francisco. Substantially bound in cloth, 240 pages, illustrated, postpaid, \$1.50. New York: E. B. Treat & Co., Publishers, 241-243 W. Twenty-Third Street.

The object of this volume is to direct attention to a new and heretofore undescribed variety of nerve exhaustion, which has been designated as Splanchnic Neurasthenia. This special form of nerve weakness is characterized by paroxysms of depression of varying duration, and is popularly known as "the blues." Its recognition is of more than theoretic interest. A mere theory may be of interest to our profession, but the layman asks science for results.

Its recognition, and the factors involved in its causation, imply our ability to cope with the evil and to offer to the sufferers not only amelioration, but a cure. From many years' experience with neurasthenics, the author knows of no variety of neurasthenia which is more amenable to treatment than the splanchnic form. A perusal of the subject-matter of this volume will show that he has referred its origin, in brief, to a congestion of the intra-abdominal veins.

Among the many resources of Nature to combat this tendency, the vigor of the abdominal muscles is paramount. The tonicity of the muscles in question is impaired by mal-hygienic clothing, occupation, disease, lack of exercise, and a host of

other conditions. The decadence of the abdominal muscles is a modern heritage; and so are hemorrhoids, constipation, hernia, and a multitude of other evils that may be traced to enfeebled abdominal muscles.

"There are a large number of impaired conditions which really owe their genesis to a congestion of the intra-abdominal veins; such affections are essentially forms of splanchnic neurasthenia, and often produce only local symptoms, confined to the abdominal sympathetic, and may never extend to implicate the central nervous system. These are especially amenable to the treatment suggested in this book, all of which is based on purely physiological reasoning.

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*The American Year-Book of Medicine and Surgery for 1904.*

A Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of GEORGE M. GOULD, A.M., M.D. In two volumes. Volume I, including General Medicine. Octavo, 673 pages, fully illustrated; Volume II, General Surgery. Octavo, 680 pages, fully illustrated. Per volume: Cloth, \$3 net; half morocco, \$3.75 net. Canadian agents: J. A. Carveth & Co., Limited, 413 Parliament Street, Toronto.

"The American Year-Book of Medicine and Surgery" continues to maintain its high place among works of its class. Indeed, the issue of 1904, now before us, if anything, is even better than the excellent issues of previous years. Such a distinguished corps of collaborators which the editor, Dr. George M. Gould, has enlisted as his assistants is sufficient guarantee that the essential points of progress are brought out, and the collaborators' notes and commentations are excellent. In the illustrative feature, the 1904 issue fully maintains its reputation, there being fourteen full-page insert plates, beside a number of excellent text-cuts. We pronounce Saunders' Year-Book for 1904 the best work of its kind on the market, as it has always been.

*A Reference Handbook of the Medical Sciences.* Embracing the entire range of Scientific and Practical Medicine and Allied Science. By various writers. A new edition, completely revised and re-written. Edited by ALBERT H. BUCK, M.D., New York City. Vol V. Illustrated by chromolithographs and five hundred and seventy-six half-tone and wood engravings. New York: William Wood & Company.

Volume V. commences with inflammation, and ends with mosquitoes in relation to human pathology. It keeps up the high standard set by the previous four, and contains especially fine productions on insanity in its various aspects. Amongst Canadians contributing to this volume we notice such well-known names as H. S. Birkett, A. D. Blackader, J. Price Brown, F. G. Finlay, W. F. Hamilton, Wyatt G. Johnston (deceased), A. G. Nicholls, J. F. Shepherd, and Beaumont Small. The chromolithographs are very fine, whilst the wood-cuts are clear and decisive. The entire work is a production of the greatest value. All the volumes, except the last, No. VIII., have been issued. When completed, the "Reference Handbook of the Medical Sciences," will be a whole library in itself. The many eminent men who have contributed in making this work the magnificent success it is, are, along with the editor and publishers, deserving of the warmest praise, as well as the cordial approbation of the entire medical profession.

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# Dominion Medical Monthly

And Ontario Medical Journal

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## A ROYAL COMMISSION ON TUBERCULOSIS.

Matters in connection with the prevention and treatment of tuberculosis are practically in chaos in this Province of Ontario. Indeed, we can scarcely state where the Toronto Association is. In view of the fact that other provinces are taking active steps to put the matter in workable shape, we believe it is incumbent on the Ontario Government to issue an order for a Royal Commission to inquire into the best plans to be adopted to bring tuberculosis under subjection, and to educate the mass of the people in a knowledge of what is to be done to stamp out or curtail the ravages of the disease. What the Toronto Association is doing, we do not know. So little information is given to the medical press, or for that matter the public press, that it is almost right to assume that the Toronto Association lacks vitality, and

that possibly it may be moribund. On the other hand, we often notice the virility of the Montreal League for the Prevention and Treatment of Tuberculosis. Just recently, it has appointed a special committee to deal with the question of a Royal Commission in Canada for the purpose of fighting tuberculosis. The question of tuberculosis is more than a sanitary one. It is a question in economics; and it is manifestly the duty of governments to take prominent part therem. But governments would seem to prefer conserving the lives of cattle and fruit trees to that of human beings. Lump jaw in cattle, and the San Jose scale on fruit trees, are apparently of more importance than tuberculosis, which annually destroys 9,000 human lives in Canada, and which claims for its own something like one in seven of the entire population. From conversations we have had with medical men, who are always eager and anxious to curtail disease in whatever form, we are convinced that the Government of Ontario would do wisely and well in appointing a Royal Commission to inquire into the condition of the Province of Ontario as regards its tuberculous population. There is an old saying that "an ounce of prevention is worth a pound of cure," and prevention in consumption is indicated just as much as it is in smallpox, diphtheria, or scarlet fever.

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#### THE RELATION OF DISEASES OF THE TUBE AND OVARY TO APPENDICITIS.

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It is becoming more and more recognized by surgeons, in operating for diseases of the tubes and ovaries, that associated appendicitis is not altogether an uncommon occurrence. That appendicitis is secondary to tubo-ovarian disease in some cases is beyond doubt; and it becomes the duty of all surgeons to examine the appendix in those cases requiring total extirpation of the tubes and ovary of the right side. Indeed, it is not such an easy matter to differentiate at all times between disease of the tube and ovary and the appendix. A case recently in point has brought this to our immediate attention. Two years ago there was a history of total removal of both tubes and ovaries, but ever since there has been recurring attacks of excruciating pain in the right inguinal fossa, and in the present instance, this pain was referred to the umbilicus and gastric regions. There was

marked pain on deep pressure over McBurney's point, and on the third day of the attack, slight rigidity of the right abdominal wall; in addition to this unceasing nausea and vomiting, with small, quickened pulse, and rise of temperature. In operations done not primarily for appendicitis, Hunter Robb has removed the appendix forty-six times, in a series of 100 abdominal operations. In 200 abdominal operations, Kelly has removed the appendix in twenty-five cases, not done primarily for appendicitis. On the other hand cases have been reported where operation was primarily performed for appendicitis, and that organ removed with no abatement of the symptoms calling for such operation. Subsequently, the right tube containing pus was removed with complete recovery from all symptoms. It becomes, therefore, a matter of keen interest to make a differential diagnosis between disease of the tube and ovary, and disease of the appendix. According to Robert T. Morris, a rigid abdomen is the principal differential sign, favoring a diagnosis of appendiceal disease over salpingitis. It is not, however, always the case that a rigid abdomen is present in appendicitis. The writer can recall a case where at no time was there present rigidity of the abdomen, the diagnosis being confirmed by the surgeon and operation advised, with the result that the appendix was found perforated in two places. As a rule pressure pain in appendicitis radiates towards the umbilicus and hypogastric regions, while pressure pain in salpingitis radiates down into the pelvis. Nausea, stomach and bowel troubles must also be taken into account, and point towards a diagnosis of appendicitis. If the colon bacillus be found in the diseased tube and ovary, the infection has been primarily in the appendix, but on the other hand if the gonococcus be found in the appendix, the infection originated in the right tube and ovary. This infection will travel along the so-called ligament of Clado, the appendicular-ovarian ligament, which is present in about one in ten cases. Appendicitis is not so common in the female as in the male. In the absence of gonorrhreal infection, the existence of the ligament of Clado, might furnish a reason why the disease is found oftener in the male. When present, this ligament carries an additional blood supply to the appendix, a branch from the ovarian artery, thus furnishing the organ with more resisting power. It becomes incumbent, then, upon all surgeons (we suppose they do it) to examine the appendix in all tubo-ovarian operations of the right side, and if it be diseased or surrounded by adhesions, to remove it at once, thus making sure of complete recovery, and no chances of subjecting the patient to a second operation.

**ALCOHOL IN PATENT MEDICINES.**

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The Ontario Council of the Royal Templars have become seized of the fact at last that the average patent medicine is whiskey in disguise; and they will, so we are informed by the public press, seek legislation limiting the alcohol in all such, to such quantity as is absolutely necessary to preserve them. In their efforts in this direction they will have the hearty and cordial support of the medical profession, who have long since pointed out the dangers of this promiscuous self-prescribing. It is to be hoped that they will go a step further, and get after the so-called catarrh cures, containing dangerous drugs, and the correctives for female errors, and thus limit the flagrant and indecent violation of all that is virtuous in our every-day press. It is difficult to understand how editors of high-class newspapers daily permit their columns to be bespattered o'er with gruesome portraits and hideous embellishments; still more difficult is it to comprehend that men of the cloth, who have gravitated into the fourth estate, shut their eyes to these self-same abuses, and connive at wrong-doing. But it is a fact that the columns which smell the foulest in this respect are guided by a cleric editor. The illustrated advertisement of most patent medicines is generally an unsightly and offensive spectacle. Even the physiognomy of the "noted specialist," if it were left out, would not cause the average subscriber to pine for its reproduction.

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**ANTITOXIN.**

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Knowing that there was not a good deal, but a great deal, of discontent amongst the members of the Canadian medical profession with regard to the price of antitoxin and a so-called "Trust" in connection with same, we invited each of the four firms in the United States interested in its marketing in Canada, to use our columns. In our correspondence pages will be found communications from three of these firms, one having replied that they would not deem it advisable to give us anything for publication at the present time. We are going to accept in good faith, as we think the profession ought to accept in good faith,

the statement made by these responsible houses that there is no "Trust" in antitoxin, or for that matter antitoxins of any and every description.

As to the price of antitoxin, the manufacturers claim that the price has been actually reduced, instead of raised. As regards two leading supply houses in Toronto, one states they have received letter after letter complaining of the price; the other claims they have received no complaints at all from their customers. As a matter of fact we are informed by one house that where formerly they supplied a greater quantity of single X serum, lately they have supplied more of the concentrated or double X; and, again, we are creditably informed that as a matter of fact the sales of the two grades throughout Canada has been in the past about equal. If this be correct, then, according to the new and the old schedule of rates, probably, roughly speaking, one-half the physicians of Canada were using single X at \$3.00 per 2,000 units, whilst the other half were using double X at \$4.00 per 2,000 units. As the price of the new package of 2,000 units is put down at \$3.50, it becomes quite clear that some consider the price raised to them, whereas those who have been using double X, have an actual reduction. As a matter of fact there was no difference in the antitoxic value of the former single X and double X grades. The difference lay in the concentration, which can be illustrated by comparing the curative value of a 1-4 of a grain of morphia sulphate in a 1-2 drachm of sterilized water with the same quantity in three drachms of the same liquid. If formerly physicians fell into the error that there were two grades of antitoxin of different curative value, the decision of the manufacturers to hereafter put one grade on the market, seems to us to be wise. Since there is something like \$400,000 of antitoxin serum marketed in Canada each year, and since it has now come to be an indispensable article in practice, the position of the question is rendered of great moment, not altogether on account of its curative value to the community.

One result of the trouble is that the Federal Government has been approached and is being influenced by different medical bodies, to the end, that they prevail upon the British Government to allow the antitoxin, as supplied by the Lister Institute, brought into Canada. It is claimed for this serum that it is the best in the world, and that the product has the guarantee of the British Government. A 1,000 unit dose, we are informed, sells at 75 cents, and we are also informed that it would sell at the same price here. This serum has in the past, been brought into

Canada, but in very small quantities. It has no special apparatus accompanying it for injection, and only some of it is, so we understand, returnable. At a recent meeting of the profession in Toronto, it seemed to be almost the unanimous opinion that the Government should deal with the matter until such times as they could prepare for the manufacture of antitoxin serum themselves. We ask for the communications on other pages careful consideration. Our only aim is to place the matter before our readers in a just and equitable light, and to relate and record facts.

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#### A PHYSICIAN'S BUSINESS ASSOCIATION.

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The first step has been taken in this city looking towards the organization of a strong business association for the medical men of Toronto. A Special Committee has been authorized to draft a preliminary constitution and submit it to a future representative meeting of the profession. This is a most important undertaking, and one which we hope will be pushed on and made progressive. There is a great need of such organizations. All our medical society meetings at present run to scientific work, and there never appears to be any time to devote to vital and important concerns. A business organization could take the initiative in just such questions as are now before us, and not leave it to societies whose prime object is the dissemination of knowledge as relates to the actual practice of medicine and surgery.

We have always advocated more time for the discussion of questions of practical polities as concerns our profession at the annual meetings of our leading societies. Generally speaking these are put off to the last day when the majority of the delegates have left for their homes, and when it is a difficult matter to muster a quorum. As regards the times, we in Canada are away behind the profession in England and the United States, so far as organization is concerned. We have practically no organization or concerted action at all. We do not stand together as a body. In view of this the proposition to get to work in Toronto and do something for ourselves, is to do something that has met with complete success in other parts of Canada in a small way. We trust that the matter will meet as it should do with the cordial support of the entire profession of this city. To the

young man struggling along for an existence, it will be sure to be a boon. For this reason it ought to appeal as well to the man of more mature years, and an easy competence, if he remembers his own struggles in by-gone days.

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### THE EARLY ANTITOXIN TREATMENT OF DIPHTHERIA.

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In view of the position of the antitoxin question in Canada at the present time some recent pronouncements in connection therewith may be timely.

Dr. McCollom, of Boston (*Boston Medical and Surgical Journal*, Dec. 25th, 1900), expressed the opinion three years ago that "small doses are of little avail in the treatment of grave types of the disease"; that "in order to obtain the best results the serum must be heroically administered." The same writer states that heart complications of a serious nature have not been so frequent among the thousands of patients treated in a Boston hospital, nor has paralysis been so prominent. Finally, "since the larger doses of antitoxin have been given, the death rate has been materially reduced; the reduction having occurred among the apparently moribund cases."

The *British Medical Journal* some time since (Nov. 10th, 1900), advised the injection of 2,000 units in mild cases, and 4,000 to 10,000 units in cases not mild—that is, "if either of the tonsils is entirely covered with thick membrane, or the palate, the nasal passages, or larynx is attacked, or if there be enlargement of glands, fetor, increased frequency of pulse, albuminuria, pyrexia and restlessness." In "bad" cases, 16,000 to 20,000 units in twenty-four hours will be required.

*Immunization.*—J. Dutton Steele, M.D., of the University of Pennsylvania (*Therapeutic Gazette*, July 15th, 1901), cites 17,516 immunized cases collected by Biggs, of which only 120 developed mild diphtheria in thirty days; twenty patients were attacked after thirty days; and in all there were but two deaths.

There seems to be a variety of opinion as to the duration of the artificial immunity thus induced, but at all events the tendency is unquestionably in the direction of larger doses. As the author just quoted says: "The dose (immunizing) which was originally placed at 200 to 500 units has advanced so that now from

500 to 1,000 units are more frequently given." It is a well-known fact that the Klebs-Loeffler bacillus may be, and has been repeatedly found in the throats of immunized nurses and others exposed to diphtheria, without the appearance of clinical symptoms of the disease.

*Stamping out Epidemics.*—In order to check the spread of diphtheria in any densely populated community, two measures are essential, viz.: isolation and immunization by the injection of 1,000 units of anti-diphtheritic serum. Inasmuch as the micro-organisms have been found in the throats of convalescents for two weeks after recovery, there is always a possibility that their virulence may survive the period of immunity conferred by a small prophylactic dose of serum. Hence, the great importance of using a sufficient amount of this harmless agent whenever necessary to employ it as a preventive measure. There is every reason to believe that the initial immunizing dose for a child under ten years should be at least 1,000 units, and when the patient's environment subjects him to repeated exposure the injections should be given at intervals of not less than three weeks.

*Municipalities as Manufacturers.*—There is another aspect of this subject that is worthy of the thoughtful consideration of the medical editor, teacher and practitioner. Recent agitation by the newspapers has prompted the health officers of some cities to venture to undertake the manufacture of antitoxin. That this is a dangerous procedure has been demonstrated, notably in the case of the City of St. Louis. A safe antitoxin cannot be made successfully except under the most favorable conditions. The essential details of a delicate scientific process cannot be entrusted to stable boys or unskilled laborers. Only perfectly sound animals can be utilized. They must be housed in large, airy, well-lighted and drained buildings, equipped with aseptic fittings. They must be cared for with scrupulous fidelity to the principles of hygiene, and must be under the constant care of trained veterinarians. The appointments of the laboratories must be perfect. The appliances must be absolutely sterile during the entire process. This involves a vast outlay of capital and the employment of high-salaried and thoroughly trained men.

*Federal Supervision.*—The United States Government recognizes the importance of a perfect equipment for this work, and now, after a thorough inspection by the Bureau of Public Health and Marine Hospital Service, issues a license to those manufacturers who can comply with its rigid requirements. It is needless to say that municipal laboratories, not being engaged in

interstate commerce, do not come under the jurisdiction of United States laws, and therefore do not have the benefit of rigid government inspection— an inspection so severe that, rather than undergo the expense necessary to comply with the requirements of the United States Government, a number of small concerns have withdrawn from the industry.

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### Editorial Notes

#### NEW KIND OF RAYS EMITTED FROM THE BRAIN AND NERVE CENTRES.

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In continuing his researches upon the rays which are given off from living organisms, and especially the human body, M. Aug. Charpentier brings out some remarkable facts. He seems to have proved that the brain and nerve centres not only give off N-rays, but also a new form of radiation which is peculiar to them. The N-rays will pass through an aluminium screen, while the new rays will not. In a paper read before the Academie des Sciences he mentions his new researches.

The emission of the N-rays by living organisms is not confined to the human body. Different animals, such as the rabbit and frog, will produce them, and no doubt inferior animals as well. Here, as before, it is the muscles and nerves which form the principal source, and the emission of rays is stronger as these are in a state of greater activity. The frog, in spite of its small size, is a good subject, and shows that the effect is not due to an increase of temperature. This can also be proved for warm-blooded animals by heating the phosphorescent test-screen to 40 degrees C. or more (when it becomes more luminous) and its phosphorescence increases as before when placed near the muscles, nerves or nervous centres, even in a state of rest, and the effect is still stronger when these are in a state of activity. The rays act upon all forms of phosphorescence. The N-rays from the sun were found to increase the brightness of the glow-worm. M. Charpentier finds that phosphorescent bacteria have their brilliancy increased when placed near the heart, muscles, and nervous centres, in about the same way as sulphide of calcium.

Seeing that solids under pressure generally emit the N-rays, the latter were sought for in the tendons during the muscular

contraction, but no effect was found. On the contrary, the bony portions which were compressed by the tendons have but few nerves, while the preceding points are abundantly supplied with nerve terminals, whose compression explains the effect. It is observed that even a slight compression of a nerve considerably increases its power of augmenting the brightness of the screen, but after a time the effect dies away. It is found that it is the nerve centres of the body which have the strongest action in emitting the N-rays. The path of the spinal cord can be traced by the proof-screen. At the upper part the effect is stronger. When the arms are contracted, a corresponding increase is seen in this part of the spinal cord, and if only one arm is contracted the effect is noticed on one side alone, due to the increased activity of this part.

To explore the rays, M. Charpentier uses straight tubes of lead, from two to four inches long, one end being placed against the body and the other containing a small disc of cork or card-board covered with the phosphorescent sulphide. Large screens cannot be used, as each part is influenced by the others, and the whole gives a uniform brightness when the rays fall upon it.\* One of the most interesting experiments is made upon the brain, by localizing the different centres of its surface. For instance, the so-called *psycho-motor* zones of the brain surface should, according to these experiments, show a local emission of N-rays during their special activity. This was found true for some of the best-defined zones. Among the latter is the zone which was found by Broca to be the centre for articulate speech. Its projection upon the skull has been determined with a certain precision by recognized rules. M. Charpentier found that when the subject spoke with a loud voice, or even in less degree, the proof-screen showed a greater activity in this region. He has reason to believe that even the action of thought, attention, and other mental effort gives rise to an increased emission of the N-rays from the brain, and is now making observations on this point. The same effect was found in the case of other centres allotted to the act of writing, movements of the upper members etc. The conclusion is that a nervous centre increases its emission of N-rays when in a state of activity. These rays are trans-

\*It may be of interest to give some practical indications as to the method of observing these radiations. A quantity of sulphide of calcium (phosphorescent) is spread upon a piece of black card-board and fixed by colloidion so as to form a thin layer; the spot should be at least ½ inch in diameter. It is then solarized moderately. The screen is observed in a dim light, darkening the room according to the brightness of the surface. The screen should be observed by indirect vision without looking at it too strongly. It must be remembered that the variations of brightness are produced gradually, with an inertia which depends upon the thickness of the sulphide; it is therefore of advantage to diminish the thickness of the layer. The proper precautions should be taken for eliminating outside effects.

mitted by divergence according to optical laws. They are refracted more or less by different media and are manifested by an increase of brightness in the proof-screen, which is variable according to the intensity of the emission and the distance.

In a second note, M. Charpentier brings out the interesting point that the rays given out by living organisms differ from the N-rays discovered by M. Blondlot in certain points, and he thinks they are formed of N-rays and another new form of radiation. This is especially true of the rays from the nerve centres or nerves, whose striking characteristic is that they are partially cut off by an aluminium screen. A sheet 1-50th of an inch is sufficient to cut down considerably the rays emitted by a point of the brain. The portion of the rays which passes through the screen is no longer cut off by new screens of the same metal, even an inch thick. This latter part therefore consists of N-rays proper. On the contrary, the rays from the heart, diaphragm, and different muscles are scarcely modified by the aluminium screen. This forms a characteristic distinction between the muscular and the nerve radiations. Other differences also separate the two. The effect from the nerves is strongly increased by compression; that of the muscles is much less so. A third characteristic of the nerve radiation is that it gives a much stronger effect over the other tissues upon a phosphorescent screen which has been heated to 40 or 45 degrees C. These facts show the predominant and special role of the radiation coming from the nerve tissues. It is the nerve radiation which shows the greatest differences from the recognized N-rays.—*Sc. Am.*

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### VITAL STATISTICS.

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The progress that has been made in collecting mortuary and vital statistics is a matter of congratulation to the medical profession. Sources of error are being eliminated, approved methods are receiving wider adoption, and the facts deduced from these figures are coincidentally becoming more valuable and more authoritative. Occasionally there is an obstacle in the march of progress.

Almost every law requiring the reporting of births provides for the payment of a small fee to the reporter. The absence of such a provision in the law of St. John, N.B., has been, in part,

the cause of the resistance of that law by the St. John physicians. In protesting against this law, the medical men assert that by reporting births they violate the confidential relationship between them and their patients. They assert that they are made spies and informers, and they "object to being made statistical officers without our knowledge or consent and without remuneration." Of the question of privileged communication, there is an easy disposal, for, under the Dominion law, concealment of birth is a criminal offence. It would seem that the physicians had left a very good chance for others to attack their argument on the ground that their strongest objection is that they are not to be paid for giving information required, and a lay paper has very pointedly found this opening in their defence. It says: "We are left to infer that if they were paid for giving this information they would be willing to forget the confidential relationship referred to." The paper calls attention to the fact that the physicians of New Brunswick are well protected by law from competition with irregular practitioners, and that it would seem only fair for them to report births as a partial expression of their appreciation of the protection. The point is well taken. The restriction of the right to practise medicine to those who are properly prepared is in the interest of the public; so also is the law requiring the reporting of births. The latter requirement seems to us to be a duty of some one certainly—and to whom could it more fittingly be given than to the one who officiates at the birth of a new protégé of the government?

The physician has always been, to some extent, an adviser in things medical of the powers that be, and he has desired even more of such official capacity. The profession has always emphasized that medical matters should be under its control. There should be remuneration, of course, but that is a minor point. Regardless of the question of pay, it seems a step backward for physicians to object to reporting births. <sup>7</sup>Editorial, *J. A. M. A.*

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The greatest argument for reading in bed (editorial, *American Medicine*) is that the attention is not distracted by the discomfort of the body, the noises, and interruptions usual at other times. Let one take an erect position of the body and head, be assured he has a good oculist, and that his light is strong, white, steady, and properly placed: he may then read with impunity until drowsiness cautions him to sleep.

## News Items

DR. C. H. WALES, Bracebridge, has been appointed to the position of Coroner for Muskoka.

DR. H. C. PEARSON, who has been practising in Collingwood for the past year, has located in Stayner.

DR. CHISHOLM, of Wingham, formerly of Erin, has consented to accept the Conservative nomination for East Huron.

DR. F. R. SEAGER's residence at Brigden was wrecked by the explosion of the acetylene gas plant, and the family had a narrow escape.

DR. R. E. COOPER, of Seaforth, has been appointed Grand Superintendent of Huron District at the Grand Chapter of Royal Arch Masons.

DR. GERALD FITZGERALD, who has been practising at Dumbalk, leaves shortly for New York, where he will take a post-graduate course in one of the hospitals.

DRS. A. T. STEELE and J. SMITH, of Shelburne have been appointed coroners for the County of Dufferin. Dr. Steele has also been appointed surgeon at that point for the C.P.R.

DR. J. J. WALTERS, New Hamburg, who has resided there for the past four years, and gained a large medical practice, has gone to his new home in Milton. Dr. Walters' practice in New Hamburg has been assumed by Dr. Withrow, of Guelph.

THE many friends of Dr. Walter Crawford, formerly of London, Ont., and at one time connected with the railway mail service, will be glad to know that he has passed his examinations in London, Eng., most successfully, and is now entitled to write after his name "L.R.C.P., M.R.C.S." He will undertake medical missionary work in East Africa.

DR. HARRY L. PAVEY, London, has very successfully passed his post-graduate examination in Edinburgh. He passed his final examination at McGill last year, and has since that time devoted his attention to study in special departments for which

the Edinburgh institution is so famous. Dr. Harry Pavey will now be entitled to write M.D., C.M., L.R.C.P., after his name.

Two tuberculosis patients were recently injected with Marmoreck's serum at the Notre Dame Hospital, Montreal, under the direction of Dr. L. J. Lemieux, of that city, who recently returned from Paris with sufficient serum for the treatment of fifteen patients. One was a case of tuberculosis of the lungs and the other of the knee joint.

APPOINTMENTS to the staff of the Royal Victoria Hospital, Montreal: Assistant surgeons, Dr. E. W. Archibald, Dr. C. B. Kenan, D.S.O.; Assistant laryngologist and rhinologist, Dr. W. H. Jamieson; Associates in medicine, Dr. H. B. Cushing, Dr. F. M. Fry; Dr. John McCrae; director of the clinical laboratory, Dr. A. A. Bruere; clinical assistants in neurology, Dr. A. A. Robertson, Dr. Malcolm MacKay; clinical assistant in medicine, Dr. Philip Burnett; clinical assistant in ophthalmology and otology, Dr. F. W. Harvey; second assistant pathologist and registrar, Dr. John McCrae; assistants in bacteriology, Dr. H. B. Yates, Dr. J. A. Williams; medical registrar, Dr. H. B. Cushing.

THE regular quarterly meeting of the Lambton County Medical Association was held recently in the I.O.F. Hall, Wyoming. Present, Drs. Hubbard and McCodrie, Forest; McAlpine, Petrolea; Bell, Sarnia; Harvey and Chappelle, Wyoming; Newell and Kelly, Watford. Dr. Harvey read an interesting and profitable paper on "The Cause and Treatment of Typhoid." Dr. Bell, of Sarnia, a valuable paper on "Surgical Anesthesia." Owing to lack of time the other subjects on the programme were postponed to the next meeting, which will be held in Sarnia the second Wednesday in February. In addition to the regular programme officers for the ensuing year will be elected at the next meeting.

LABORATORY FOR QUEEN'S UNIVERSITY.—Queen's Medical Faculty have asked the Ontario Government to establish there a branch laboratory, in connection with the Board of Health, for the examination of pathological specimens. Such a laboratory would be an immense benefit to Eastern Ontario. For instance, in order to get specimens tested free of charge, physicians in the

east have to send them to Toronto, where the Government Laboratory is situated. If a branch was established in Kingston, the results would be secured much quicker. The laboratory has become a necessity, and there is no doubt but what the Government will accede to Queen's request. It could be under the direction of Dr. W. T. Connell, Queen's specialist in bacteriology and pathology. Kingston doctors have their specimens examined at Queen's, but have to pay for the work.

DR. MACPHAIL, of Montreal, a medical expert in life insurance examination, has, during many years, been making interesting investigations as to the liability to earlier death of persons rejected by insurance companies, as compared with the liability of those accepted. He took note of 5,115 applications, of which 409 were rejected cases, and then followed up, so far as he could, the after record of the rejects. He traced 235 of them, of whom, during fifteen years, only thirty-one died, whilst according to insurance actuarial figures, had the 235 been "sound lives," no less than 25 should have died in that period. The doctor's conclusion is that those who are rejected by insurance companies, as a rule, manage to live about the usual average. One reason for this may well be that in consequence of life insurance rejection, an ordinarily steady man takes special care of himself.

## Correspondence

### CHARITY WORK FOR WEALTHY INSURANCE COMPANIES.

*To the Editor of DOMINION MEDICAL MONTHLY:*

Dear Sir,—Every week or two I receive a letter from an insurance company which can afford to pay its president fifty thousand dollars a year, requesting me to assist them in what is to them the very important task of choosing a medical examiner for some district which they mention, together with the name of a medical friend of mine, on whose character and ability they wish me to make a confidential report. Their request is not accompanied by a cheque nor any promise of a fee; on the contrary they state very distinctly that it is purely as a matter of

friendship to the doctor mentioned that they want me to report on his character and ability. As I have no object in the world in doing a charity service to a company which has millions of money invested, and which pays its chief officials such enormous salaries, while it pays the doctors upon whom its success depends such wretchedly small ones, I try to do a service to my medical friend by telling all his good qualities. How can they expect any one to mention the other ones, when they treat us so dishonestly as to try to get something of great value from us for nothing? If they enclosed a fee I would feel that they were employing me temporarily to protect their interests. But acting as they do, I feel that the only interests that concern me in the matter are those of my friend. And I act entirely in his interests. Were it not that I fear to hurt him, I would send the letter back to them unanswered. I would be glad to hear whether your readers generally adopt this latter course, or whether they tell the companies what they think of their meanness.—Yours very truly,

VICTIMIZED.

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### THE ANTITOXIN QUESTION.

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*To the Editor of DOMINION MEDICAL MONTHLY:*

Dear Sir.—We gladly act on your suggestion of the 18th, addressed to our Walkerville house, and enclose herewith a statement, purposely made as terse and compact as possible, in refutation of the false and ridiculous rumors about the alleged "antitoxin trust," which have emanated from the "yellow press" of Chicago. Thanking you for the privilege, we remain, very truly yours

PARKE, DAVIS & CO.

Detroit, Mich., February 22nd, 1904.

We are aware that rumors of the formation of an Antitoxin Trust have occasioned more or less uneasiness among the medical profession of the Dominion during the past few weeks. We are, therefore, pleased to have this opportunity to lay before your readers a perfectly frank statement of the situation as it really is.

In the first place the manufacture of antitoxin involves a vast and expensive equipment, and has not proved as profitable as it is supposed to be. This is due principally to the fact that such large quantities, about 40 per cent., are returned at the ex-

piration of the time limit to be exchanged for fresh product. Formerly two grades of antitoxin were marketed, each in five different sizes. The necessity for the exchange of so much serum arose from the tendency of druggists to accumulate too great a variety of packages in the two grades. Furthermore, considerable confusion existed in the minds of physicians as to the relative strength of the "X" and "XX" antitoxin, many supposing the latter to be twice as potent as the former, whereas their only difference was in the volume of fluid or the bulk of the dose employed. Apropos of this phase of the subject, Dr. B. R. Shurly, in a recent number of *Pediatrics*, makes these remarks: "A fatal error has frequently come under my observation, that of mistaking the meaning of the classification, Double X serum. Double X serum refers to twice the bulk of concentration of the product, but no increase in antitoxic value. In other words, 2,000 units single X are identical in curative value with 2,000 units double X. The majority of physicians who have used antitoxin occasionally fall into the serious and fatal error of believing one to be twice the value of the other. It would seem necessary to request the laboratories manufacturing antitoxin to make the directions and title of the product so clear that no possible confusion can arise. Under the present system the mistake is leading to fatal results."

We have decided only to reduce their losses and simplify the manufacture, marketing and therapeutic application of antitoxin in the future by making but one grade instead of two, as formerly; the new grade to be nearly, if not altogether, as concentrated as the old "XX." This has resulted in the adoption of the following schedule of prices which actually represents a reduction and not an advance, because of the concentration of the new serum.

Number of units in package.*	Price of old X Serum. <sup>t</sup>	Price of old XX Serum. <sup>t</sup>	Price of new package	Number of units per Cc. in new package.
500	\$0.75	\$1.15	\$1.10	300
1000	1.50	2.25	2.00	300
2000	3.00	4.00	3.50	400
3000	4.50	5.75	5.00	500
4000	(Not formerly listed)		6.50	600

In addition to the above we keep in stock, for sale on demand only, but without formal addition to our list, a 500 unit

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\*With the new package either one of two injecting devices is supplied the purchaser, at his option, by Parke, Davis & Co.

<sup>t</sup>Old "Standard" or X serum tested 200 units to the Cc.

<sup>t</sup>Old "Special" or XX serum tested 500 units to the Cc.

dose and a 1,000-unit dose, both in the old style hermetically-sealed bulb, without injecting device, at the respective prices of 75 cents and \$1.50, as in the past.

To boards of health and municipalities, on application, will be supplied a pure, safe and reliable serum of guaranteed potency at a specially low price commensurate with cost, on the following conditions: (a) that it is to be donated to the indigent sick and not resold, (b) that it is not subject to exchange, (c) that it is to be supplied in hermetically-sealed bulbs unaccompanied by injecting devices.

This is the whole situation in a few sentences. There has been no combination to force up prices. There is no Antitoxin Trust or monopoly of any kind whatsoever. The private manufacturers of antitoxin are bearing a great burden. We maintain an expensively equipped establishment for the preparation of our products. It costs a great deal of money to carry on the business, so that the difference between the cost of producing the antitoxin and its retail selling price is not all profit by any means. Private manufacturing establishments in the United States are under strict governmental inspection, and must obtain license to do business. This license may be revoked immediately, should circumstances warrant the procedure. The requirements for licensure are so rigid that several small concerns have elected to retire from business rather than undertake compliance with them.

In the use of so valuable and so potent a remedy as antitoxin, difference of a few cents in price should have no weight. In the present instance, the difference being in reality a reduction, the profession will have not the slightest cause for the concern that was inspired by that portion of the newspaper press described by the term, "Yellow Journalism."

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*To the Editor of DOMINION MEDICAL MONTHLY:*

Gentlemen,—We are in receipt of a letter from our authorized general distributors, Messrs. John Wyeth & Bro., of Philadelphia, quoting from a communication from you, in which you kindly offer to give prominence in your pages to anything they may have to say with reference to a so-called Antitoxin Trust, which subject has been given much consideration recently by the lay press.

Messrs. Wyeth & Bro. suggest that an explanation of our

position be given you, and complying we beg to say, first of all, that we are not members of any trust, and that we are not aware of the existence of a trust in biologic products or any monopoly of the production thereof. We are supplying antitoxin now at a lower price than we ever supplied it, and at a price which is as low as is consistent with a high-class product.

It is true that our price list, as well as our plan of marketing serum, have recently undergone some changes. Heretofore we listed and supplied generally two strengths of serum, a concentrated or high potency serum and a standard or low potency serum. While the curative power of a given number of units is the same in each of these serums, the higher potency is preferred because it is necessary to inject less serum in order to administer the same number of antitoxic units. It is also more difficult to procure, and for this reason the price of it is higher. When we supplied the Standard and Concentrated serum generally our price list was as follows:

Concentrated			Standard		
No. 1 . . . 500 Units	1.20		No. 1 . . . 500 Units	.75	
No. 2 . . . 1000 Units	2.25		No. 2 . . . 1000 Units	.75	
No. 3 . . . 1500 Units	3.25		No. 3 . . . 1500 Units	2.25	
No. 4 . . . 2000 Units	4.00		No. 4 . . . 2000 Units	3.25	
No. 5 . . . 3000 Units	5.75		No. 5 . . . 3000 Units	4.50	

There is a very considerable demand for the low potency serum from Boards of Health, municipalities and charitable institutions because of the low price of it. It is purchased by these institutions for free distribution among the poor who are unable to pay for antitoxic treatment. In revising our method of supplying serum recently we withdrew the Standard or low potency serum from our price list, and supply it now only to Boards of Health and other institutions, and at a much lower figure than we heretofore listed it; while the price of the Concentrated serum, which we supply generally, was also very materially reduced, as is shown by a comparison of our former and present price list on this class of serum:

Former Price			Present Price		
No. 1 . . . 500 Units	1.20		No. 1 . . . 500 Units	1.10	
No. 2 . . . 1000 Units	2.25		No. 1 . . . 1000 Units	2.80	
No. 4 . . . 2000 Units	4.00		No. 2 . . . 2000 Units	3.50	
No. 5 . . . 3000 Units	5.75		No. 3 . . . 3000 Units	5.00	
(4000 Units not listed)			No. 4 . . . 4000 Units	6.50	

The demand for the larger doses of antitoxin is constantly increasing, and in order to meet this we have put on the market a 4,000 units package, which we list at \$6.50, and as an illustra-

tion of the marked reduction in the price of our serum recently, we call attention to the fact that 4,000 units heretofore would have cost \$8.00, as will be seen by glancing at our former price list. A still greater reduction than this has been made in the price of the low potency or Standard antitoxin, which we now supply only to Boards of Health for free distribution among the poor.

We thank you for this opportunity of presenting our position to your readers, and we beg to remain, very truly yours,

H. M. ALEXANDER & Co.

Marietta, Pa., February 24th, 1904.

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*To the Editor of DOMINION MEDICAL MONTHLY:*

Dear Sir,—Our attention has been called to a sensational article appearing in the Chicago papers, in which the manufacturers of antitoxin are charged with having formed a trust and advancing the prices of diphtheria antitoxin, this advance being prejudicial to the best interests of the public health, and inimical to the best interests of the medical profession.

It is not true that the antitoxin manufacturers have combined in a trust; it is not true that the prices of antitoxin have been advanced, but on the contrary, the prices of antitoxin have been reduced when quality of serum is considered. So that you may have a clear understanding of the situation, we beg to advise the following:

For a long time the different manufacturers have endeavored to improve the quality of diphtheria antitoxin. It has formerly been the custom to manufacture two strengths, known as Standard and Concentrated, or X and XX. There were also supplied certain sizes, known as 500 and 1,500 units packages. There is now but one strength of antitoxin that will be placed on the market, and that will be practically the highest strength, formerly known as Concentrated serum. This is the best quality of serum obtainable, and on this quality, instead of the prices being advanced, they have been materially decreased. For instance: For the 1,000 units there is now a charge of \$2.00, against a former charge of \$2.25; for the 2,000 units there is now a charge of \$3.50, against a former charge of \$4.00; for the 3,000 units there is now a charge of \$5.00, against a former charge of \$5.75; for the 4,000 units there is now a charge of \$6.50, against a former charge of \$7.50.

The 500 and 1,500 units packages have been discontinued, the 500 units being insufficient to insure thorough immunization, and the 1,500 units on account of its small demand.

You will thus see that the interests of the medical profession have been safeguarded, inasmuch as but one strength—and that the best—will insure the highest quality of antitoxin being furnished. The revision of prices is also decidedly in favor of the physician and his patient, because the physician is now able to get the best grade of antitoxin at a lesser price than formerly charged.

Instead of marketing antitoxin by number, as heretofore; it is sold by the units package, 1,000 units representing an immunizing dose; 2,000 units, a small curative dose; 3,000 units, a moderate curative dose; 4,000 units, a full curative dose. This style of nomenclature makes it easier for the physician than heretofore, and since the best quality of antitoxin is sold at a lesser price, it will prove an additional incentive to use full doses, which all authorities recommend in order to secure the best results from antitoxin.

Every manufacturer to-day is striving to meet the demand for the most convenient means of administering antitoxin, and while the improvement in package, by which every dose of antitoxin is furnished in an aseptic serum syringe, including sterile needles, has entailed considerable expense to the manufacturer, it is offered at less cost to the physician.

There was formerly some of a lower grade serum used, and we feel sure that its discontinuance will be of material advantage.

It is possible that the Chicago Board of Health may be compelled to pay more for its antitoxin. If so, it is only just, as it had been quoted a price that does not yield sufficient remuneration to anything like cover the expense involved in producing. However, the Chicago Board of Health will now be able to get a better quality of serum than was formerly used, as the weaker strength which it formerly used has been entirely discarded.

We hope that you will place this matter in the true position before your readers, in order that they may understand that there is no truth whatsoever in the sensational reports relative to the so-called "trust or combination" of the manufacturers of antitoxin, and the statement that the prices have been raised, when as a matter of fact the former prices are considerably reduced. Very truly yours,

H. K. MULFORD COMPANY.

Philadelphia, February 23rd, 1904.

## Obituaries

### M. F. HANEY, M.D.

Dr. Matthew F. Haney died recently at his home in Humberstone, after an illness extending over several months. He was one of Humberstone's oldest residents, and a pioneer of the county. The following biographical sketch is taken from the Welland county history:

"Matthew F. Haney was born in the township of Pelham, April 4th, 1824. He is a son of Matthew and Anna (Mains) Haney, both natives of Canada. Our subject received his preliminary education at the St. Catharines Academy, Lincoln county. He then engaged in the study of medicine and became a graduate of the Buffalo Medical College in 1850. He afterwards attended the Toronto Medical University, passing the Board of Examiners in 1851, obtaining a license to practise his profession in this Province, and since that period has been located in the village of Stonebridge. Our subject has always taken an active interest in educational affairs, and was for twelve years local superintendent of Public Schools, during the Ryerson *regime*. He was elected a member of the township council of Humberstone in 1857, and served in that capacity for four years. He afterwards served as reeve for a like term of years, and occupied the warden's chair in 1871. During the Sandfield Macdonald administration the doctor was appointed justice of the peace, and both as magistrate and physician enjoys the confidence and esteem of the entire community."

For the past few years Dr. Haney had not practised. He has always been a staunch Conservative, and took a deep interest in public affairs. He was loved and revered by all who knew him.

### DAVID B. BOWLBY, M.D.

Word has been received at Berlin, Ont., announcing the death at Rome, Italy, of Dr. David B. Bowlby, of Berlin, Ont. The deceased, who was over eighty years of age, was a brother of

Mr. J. W. Bowlby, of that city. He was making a tour of Europe, and intended going to Egypt shortly. The news of his sudden death will be received with great regret.

Dr. Bowlby was well-known throughout the Province as a leader in the medical profession.

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### JOHN HERBERT SANGSTER, M.A., M.D.

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A notable figure in the Canadian medicine and educational world passed away at the King Edward Hotel, Toronto, recently, in the person of John Herbert Sangster, M.A., M.D., of Port Perry. With Mrs. Sangster he came into the city the previous day for the purpose of meeting his daughter and her husband, Dr. S. C. Corbett, of Winnipeg, on their return from their wedding tour in the Bermudas. It was the intention of the party to go to Port Perry yesterday prior to the departure of Dr. and Mrs. Corbett for Winnipeg, their future home.

The cause of death was heart disease, from which Dr. Sangster had been a sufferer for the past two years, but the end came suddenly and unexpectedly, as deceased was in good health and spirits.

Deceased leaves a widow, three sons—Dr. Sangster, of Port Perry, and two others in the civil service at Ottawa—and one daughter, the wife of Dr. S. C. Corbett, a leading physician in Winnipeg, and the head of the Dominion Government medical service there. He was a member of the Church of England. He was twice married—in 1851 to Miss Mary Price, of Toronto, and in 1871 to Miss Caroline Elizabeth McCausland, also of this city.

The late Dr. Sangster was born in London, England, on March 26th, 1831, and came to Canada with his parents. He received his early education at the Upper Canada College. In 1847, when the first Provincial Normal School was opened in Toronto, he became one of the first class of students, and was at his death its only survivor. In spite of his youth—he was then only sixteen—his ability attracted the favorable notice of the then Principal, T. J. Robertson, and of the then Chief Superintendent of Education, Rev. Dr. Ryerson, through whose influence he was appointed successively assistant master of the

Provincial Model School, head-master of the Hamilton Central School, assistant master of the Model Grammar School, second master of the Normal School, and, finally, in 1866, principal of the same institution, which position he filled till 1871.

During the whole term of his connection with the Normal School he was professor of chemistry and botany in Rolph's Medical School, which was the medical faculty of Victoria University. He prosecuted the study of medicine meanwhile, and took the degree of M.D. On his retirement from educational work in 1871 he settled in Chicago, but after a brief residence there returned to Canada and began the active practice of medicine in Port Perry. In 1874 he was defeated by Mr. Goldwin Smith in a contest for a seat in the Council of Public Instruction, and after that event he took no further public part in educational work. He was eminently successful in his profession, and in November, 1894, he was elected a member of the Ontario Medical Council. In that connection, he will long be remembered for the strong fight he made for a number of years for a change in the composition of the council. His chief objection was to the presence upon the council of colleges not teaching medicine, and his fight was to a great extent successful when the matter came before the Legislature. Having succeeded in his effort, he became an ardent supporter and one of the most useful members of the reformed council.

Between 1856 and 1871, Dr. Sangster prepared and published a number of school books, which became the exclusively authorized text-books in the Public Schools of the Province. Perhaps the best known of the series was "Sangster's Arithmetic." He was also noted for his talents as a writer upon public questions and his powers as a public speaker. In July, 1892, he was the orator of the day at the "hoisting of the flag" ceremony in London, Ont., when he spoke upon the subject, "One Century's Transformation in Canadian Life," and at the Normal School jubilee celebration at Toronto, November, 1897, he delivered a remarkably able address on "Progress in Education." During the equal rights movement in 1890 he was the author of a series of letters, signed "Gracchus," which attracted much attention. Among his later public appearances was the one at the reunion of former Central School pupils in Hamilton, where he was the honored guest of many of those whom he had taught half a century ago.

**DUNCAN FRASER, M.D.**

Dr. Duncan Fraser, for over twenty years a continuous resident of Lakefield, died in that town recently, after an illness of only a few days. The deceased was born in Shakespeare, near Stratford, fifty-seven years ago, where he received his early education, and also taught a school for a number of years. He then attended Trinity Medical College, Toronto, graduating therefrom in 1874, and winning the silver medal. In the same year he also had the additional distinction of capturing the silver medal given by the Toronto Medical School. Deceased was a brother of Dr. D. B. Fraser, Stratford, Ont.

**W. G. CHRISTOE, M.D.**

In the death of W. G. Christoe, M.D., there will be missed from the streets of Flesherton, and from public and social life, one of its most prominent and familiar personages; one who has perhaps filled a larger place in the village life than any other man in his time. The intelligence of his death came with shocking suddenness to his friends and neighbors, as very few knew that he was ailing, having been seen on the streets and at the postoffice for his mail on the previous Tuesday. Deceased was born in the town of Lostwithall, County of Cornwall, England, on May 12th, 1824, and had therefore almost completed his 80th year. He came to Canada in 1842, and in the township of Percy, county of Northumberland, was for some time engaged in the teaching profession. In 1846 he returned to England to his native parish to bring his bride whom he found in the person of Miss Hannah Pearce, who with one daughter, Mrs. (Rev.) L. W. Thom, of Flesherton, survives him. In 1850 he engaged in general mercantile business in the village of Orono, near Bowmanville, and continued for thirteen years. He then gave up business to study medicine, and in 1863 graduated from the Toronto School of Medicine in affiliation with Victoria University. He first settled for practice in Owen Sound, but in 1867 removed to Flesherton, where he built up an extensive practice, adding to his practice a drug business which

he disposed of a little over a year ago. Several years ago he gave up practice other than to those who came to him for office consultation. He first entered municipal life in Artemesia in 1874, as councillor, and the subsequent sixteen years was reeve, being elected several times by acclamation. In 1881 he was warden of the county.

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### THOMAS NORTON, M.D.

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Dr. Thomas Norton, one of the most widely-known physicians of this part of the province, died at Shelburne, January 14th, after a long and lingering illness, due to cancer of the stomach. He was born in Montreal fifty-two years ago, and graduated from McGill. He began the practice of his profession at Horning's Mills, but later moved to Shelburne. At one time he was President of the Turf Association, and of the 36th Battalion Band. He was coroner for the Counties of Dufferin and Gray, and surgeon to the Canadian Pacific Railway. He was married twelve years ago to Miss Annie L. Roberts, only daughter of W. L. Roberts, of Port Perry, and is survived by his widow.

The late Dr. Norton was a most genial and upright citizen, and was a very skilful member of the medical profession. He was a man of worth and intelligence, and was held in high respect and esteem wherever he was known. His widow will have the sincere sympathy of her many friends in her sad bereavement.

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### FRED H. S. AMES, M.D.

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Dr. Fred. H. S. Ames, brother of Mr. A. E. Ames, of Toronto, died recently in Denver, Col. He graduated from the Toronto School of Medicine twenty-four years ago, and after practising in Sarnia first, was obliged to leave for Colorado on account of his health. For the past ten years he has lived and practised in Denver. He was about 45 years old, and leaves a widow, formerly Miss Ida Taylor, of Parkhill, one son and two daughters.

**GEORGE COOKE, M.D.**

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On the 31st of December, going out with the old year, George Cooke, the pioneer doctor of Chesley, died at 26 Leopold Street, in South Parkdale, at the age of 66 years. When he removed from Chesley five years ago he was greatly missed in the village, and remembered for his unfailing courtesy, his kindness of heart and his keen sympathy. Dr. Cooke studied medicine under Dr. Ralph, famous for his share in the troubles of 1837. After practising medicine a short time at Erin he removed to Chesley in the year of Confederation. He rode in with Mr. Henry Landerkin, a brother of the late Senator. It is related that he was not impressed with the surroundings and decided not to locate, but in the meantime Mr. Landerkin, who desired him to remain, had ridden off with the horse, and, per force, Dr. Cooke stayed. For many years he enjoyed an immense practice, and to this day his skill in certain diseases is spoken of in terms of the highest praise by the older settlers. He entered municipal life and served as a councillor in 1884, 1885 and 1886, and as reeve in 1887 and 1888. It was characteristic of the warm heart of the late doctor that when he removed to Toronto his affection for Chesley, where he had spent his life, remained unimpaired. His family say that to the last he took more interest in Chesley than in Toronto, and insisted upon *The Enterprise* being read to him every week, to the exclusion of the Toronto papers. It was fitting that the flag was half-masted and the bell tolled as the funeral cortege passed through the village with the mortal remains of a skilled and kindly physician, who belonged to the noble race of pioneers whose ranks are thinning fast.

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**J. B. MURPHY, M.D.**

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Dr. J. B. Murphy, superintendent of the Brockville Asylum for the Insane, died suddenly, on January 17th, from heart disease. He attended services in St. Francis Xavier Church, and walked part way home, being driven the remainder of the distance. He made no complaint of feeling unwell until after getting into the house. Upon removing his clothing he

laid down on the couch, expiring almost instantly. Doctors were called from the asylum close by, but it was too late. Dr. Murphy was born at Asphodel, Peterborough County, in 1850. He was educated at the Norwood High School, and St. Michael's College, Toronto, and afterwards attended Queen's College, where he graduated in medicine in 1876. He practiced his profession in Belleville till 1891, when he was appointed medical superintendent of the Mimico Insane Asylum. Upon the opening of the Brockville Asylum, in 1894, he was placed in charge, and held the position till his death. While a resident of Belleville, he was physician of the Deaf and Dumb Institute. He married a daughter of the late L. C. Boulter, of Toronto, who, with a family of four sons and two daughters, survive. He was an ardent member of St. Francis Xavier Church, and a representative on the Executive Committee. He was also a member of the Catholic Mutual Benefit Association.

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### ROBERT LAMBERT, M.D.

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Dr. Robert Lambert, aged 76, the oldest physician in Windsor, passed away at an early hour on January 21st of a general breaking down, caused by old age. For over forty years he practised his profession in Windsor, and at one time was the city health officer. Dr. Lambert was born in England in 1821. He came to Canada in early life and graduated in medicine from Queen's University, Kingston, in 1859. The doctor was a post-graduate of Bellevue Hospital, New York. A widow and three children survive.

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### W. J. ANDERSON, M.D.

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Dr. W. J. Anderson, of Smith Falls, Ont., died on February 19th, after a lingering illness. Dr. Anderson was born in the County Antrim, Ireland, in 1839, and is a son of the late Rev. J. Anderson, M.A., a prominent and eloquent Presbyterian divine. He took a prominent part in public affairs, and was in politics a Conservative, being the Conservative candidate for the Dominion House in 1878 for North Leeds and Grenville.

**Prize Competition, see Pages 228 and xxxiv.**

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## Original Articles

### ABDOMINAL PAIN.\*

BY J. H. MUSSER, M.D., OF PHILADELPHIA.

(Published concurrently with *American Medicine* by kind permission of Author.)

With the limitations that must be placed on all subjective symptoms, pain is the one which more than all others leads to the recognition and localization of disease within the abdomen. Fortunate is the physician who has the aid of a patient with clear intelligence to describe the character, the mode of onset, the localization, the direction of transmission, the association with altered function, and the many qualities of this valuable clinical expression of disease. Unfortunately, too often, when the aid of the patient is needed the most, as in the toxic period of typhoid fever, it avails not as it should.

#### ASSOCIATE EXPRESSION OF PAIN.

*Spasm of Muscles.*—The occurrence of *spasm* of muscles, related by nerve supply to the organic lesion which causes the pain, as indicated by *resistance*, is of great aid in the localization of the lesion. No more valuable indication of the occurrence of irritation or inflammation exists than this symptom. Of much

\*That portion of the symposium on abdominal pain assigned to the author—abdominal pain in general and that due to disease of the stomach, liver and pancreas. Presented to the New York State Medical Association at the meeting in Albany, January 26th to 28th, 1904.

significance under certain circumstances is its *absence*, for often it does not imply under such circumstances the absence of lesion. (a) It is wanting, of course, when there is no muscle, or perhaps very little, to undergo spasm. Hence in atrophied abdominal walls, as occur in women from overdistension, such spasm may not occur. In a case of perforating gastric ulcer with oncoming peritonitis, operated on by Keen, within six hours of perforation, no spasm or resistance was detected. Similar cases of such character have occurred in cholecystitis, when often for similar reasons—mural atrophy—the muscle spasm is wanting. (b) It disappears with the onset of toxemia, and hence a rapidly lessening resistance with the slightest evidence of advancing toxemia, as indicated by the expression, the tongue, the pulse-rate, the mental condition, even though the temperature falls, is of grave significance. It may be found that the leukocytes do not increase, but may even fall to a moderate height, as 9,000 to 12,000 or even less, as we also find in grave pneumococcus infections, when a moderate leukopenia may be present.

*Tenderness of Cutaneous Surface.* *Hyperalgesia.*—Hilton, Head, Mackenzie, and others have repeatedly called attention to alterations of cutaneous sensibility in the distribution of spinal nerves related to affected organs within the body. Sherren\* has called renewed attention to this cutaneous hyperalgesia, elicited by gentle friction or pinching of the skin or by the head of a pin or some blunt instrument. That such hyperalgesia may exist is well known, but the point I wish to make is, if it exists and then disappears, as may also spasm and pain, the change is of ill omen unless all other symptoms subside. The absence of, or rather the disappearance of hyperalgesia means the occurrence of gangrene or perhaps perforation.

#### PAIN IN THE ABDOMEN DUE TO GENERAL CONDITIONS.

*The Intoxications.*—I shall pass over that due to lead-poisoning, only venturing to reinforce the warning of Janeway, and speak of abdominal pain due to uremia. The French authors have long since called attention to this symptom, and many years ago I made a verbal communication to the West Philadelphia Medical Society on it. I had seen it, as had likewise the French observers, in or preceding the uremic convulsions of puerperal nephritis. In the instances under my observation, the pain was in the epigastrium and both hyperchondria. Only recently I

\* "On the Occurrence and Significance of Cutaneous Hyperalgesia in Appendicitis," James Sherren, F.R.C.S. Eng., *Lancet*, September 19th, 1903.

was asked to see a case of alleged severe indigestion with cramps in a woman who had been delivered four hours previously, and who had nephritis in the latter part of her pregnancy. I warned them of the oncoming of uremic convulsions and coma, which unhappily was too true four hours later.

#### UREMIA SIMULATING PERFORATING GASTRIC ULCER.

In my service of 1902, in the University Hospital, a patient was under my care for well-defined syphilis and nephritis. She had some epigastric pain, constant vomiting, and hematemesis. For reasons a gastric analysis was not made, but the vomitus did not give signs of any definite organic disease. On one occasion, while vomiting was temporarily arrested, sudden pain and shock ensued. The temperature fell to 96 degrees and the pulse rose. I was informed perforation had taken place. Professor Frazier saw her with me a few hours later. As the toxic features of uremia appeared to be increasing, operation was deferred. Temporary recovery from the uremia took place, but death followed within a month.

At the autopsy a marked chronic gastritis, with ecchymosis and abrasions of the mucous membrane, were found, but no ulceration of the stomach. The patient narrowly escaped operation.

The next patient was not so fortunate. I saw him on an afternoon, with well-defined uremia. He suffered very much from abdominal pain. He had an inguinal hernia. I sent him to the hospital, and asked that a surgeon see him to discuss with me the relation, if any, of the hernia to the pain and vomiting. We were prevented conjoint attendance upon the case, and the surgeon, thinking I had sent him in for operation, performed it without delay. Neither incarceration nor strangulation were found, and later the autopsy showed that pain could not be accounted for by any abdominal conditions. It was evidently toxic.

*Hysteria and the Neuroses.*—I mention these states for the purpose of disclaiming against the accepted ideas of the frequency of abdominal pain of such origin. Too often we take refuge under the cloak of hysteria; too often such diagnosis is a confession that we are ignorant of the true cause of suffering. As our experience increases I am sure we can "run down" these so-called neuroses. The more I learn of abdominal disease, the less I see of hysteria. Not many years ago I saw a seemingly well-defined case of hysteria. The patient had great pain in the region of the liver and the right shoulder, and ill-defined symp-

toms of gall-stones. Her mother had had gall-stones. Because of the general symptoms, and especially the nervous symptoms, I gave it as my opinion that the pain was probably a neurosis, and advised against an operation. Later, gall-stones were passed, and soon the patient was restored to health. The non-hysterical origin of the pain, formerly attributed to the neuroses, is strongly supported by our increased knowledge of headaches. The ophthalmologist has hunted down many of the headaches formerly described as neurasthenic, and within a few years the mysteries and vagaries of sinusitis, giving rise to various forms of headache and neuralgia, to which belongs the headache of early morning, continuing throughout the day, "disappearing as the sun goes down," has deprived hysteria of many accusations.

#### ABDOMINAL PAIN NOT DUE TO DISEASE BELOW THE DIAPHRAGM.

Speaking to clinicians, it is not necessary to go further than to remind them *seriatim* of the many cases of abdominal pain due to extra-abdominal causes. Thus we have pain due to:

1. Crises of locomotor ataxia and other organic spinal cord diseases.
2. Spondylitis rhizomalique. A case of this nature was brought to me, considered to be cancer of the liver or kidney. Many cases are referred to in the literature of the subject.
3. Caries of the vertebra.
4. Cancer of the vertebra.
5. Aneurysm of the thoracic aorta, especially located above the diaphragm.
6. Diaphragmatic pleurisy and rheumatism of the diaphragm.

A case that caused much interest was that of a robust man, who had been operated on for hemorrhoids. The man was evidently infected at the time of operation in the field of the operation. Fever and a mild leukocytosis were present. After a cold bath three days later the patient had a chill, severe pain in the lower thoracic and upper abdominal region, tenderness along the diaphragm, dyspnea, and slight cough. No signs of pleurisy could be brought out. When the liver was brought down by a full breath against the palpating hand it excited pain, which suggested a tender liver. There was some myalgia about the shoulders. The fever and leukocytosis persisted. Although the development of multiple abscess of the liver or sub-diaphragmatic infection was suggested, the general picture was that of diaphragmatic pleurisy, or rheumatism, with myalgia

in other situations, occurring incidentally in a person with an infected rectal wound. The difficulties of the case can be imagined when it is known the patient was a highly neurotic physician, who bore pain badly, and the attendants were two brothers, who were maximally sympathetic and keenly alive to pathologic possibilities, the one a leader in ophthalmology, the other a great nose and throat specialist.

7. Pulmonary affections. Pleurisy need not further be considered as a cause of abdominal pain. Of pneumonia much more must be said. During the past five years two or three cases occurred each winter, in which I was called upon to decide if the anticipated operation, for a reputed abdominal affection, was or was not required. My notes of six cases belong to children, and it is chiefly in them we find pneumonia with symptoms of some acute abdominal affection, chiefly appendicitis. I have seen cases of pneumonia in older subjects treated as some form of liver disease, because of pain in the right hypochondrium and jaundice.

8. Cardiac affections. We can only refer to the epigastric pain of acute pericarditis, a disease so often void of symptoms and signs; of a congested left lobe of the liver in acute failure of compensation; of angina pectoris. When it is remembered in all these conditions, as well as pulmonary affections, vomiting and also flatulence may occur, we can realize possible difficulties to many.

#### ABDOMINAL PAIN DUE TO (a) GASTRIC AFFECTIONS.

The pain due to forms of gastritis, that due to ulcer, and that to carcinoma are so well known it is not necessary for me to enter into their consideration. I will content myself with calling renewed attention to the pain of pyloric spasm, due to hyperacidity or to gastric ulcer, and to the pain of the incontinence of retention in cases of mild or perhaps spasmodic pyloric stenosis; to the change in location of the pain due to gastric ptosis; and to the extreme rarity of gastralgia, apart from hyperchlorhydria or organic spinal disease. Alleged gastralgia is so frequently an aberrant form of hepatic or pancreatic colic, that these conditions must be definitely excluded before we rest content with the diagnosis of a functional disorder. I must take this opportunity to urge alertness on the part of the clinician to detect the earliest evidence of shock, for, as an attendant upon perforation, its significance must be realized if we want to diagnose the accident. Instead of "shock," in the true surgical

sense, a chill, a syncopal attack, some faintness or a hurried pulse may be the only expression of a perforation.

*Epigastric Hernia.*—It may be proper here to say a word regarding that infrequent condition, epigastric hernia. The occurrence of epigastric hernia gives rise to symptoms which may simulate gastric affections or diseases of the gall-bladder and gall ducts. Careful inspection and palpation will disclose the presence of the small subcutaneous tumors characteristic of this lesion.

(b) HEPATIC PAIN.

Only to be mentioned to remind you of the many excellent papers on this subject read by members of this organization, and that the pain of early primary affections should be heeded, for it is the operative relief of these affections that prevents the long series of secondary affections.\*

(c) RENAL PAIN.

This must be passed over with the memoranda that the recognition of renal calculi can be wonderfully aided by radiographs, and to call attention to a rare condition which simulated renal pain.

*Phlebitis.*—The patient had had a movable kidney transfixed by operation. Obstinate pain followed and simulated in part renal pain, although neither clearly paroxysmal nor attended by hematuria, as in renal calculus. The radiograph showed an apparent calculus in the ureter about the brim of the pelvis. Operation for its relief disclosed varicose veins in this situation with two or three phleboliths the size of peas in the veins coursing parallel with the ureter.

(d) PANCREATIC PAIN.

Exhaustively discussed recently, time forbids my going further than to state my conviction that pancreatitis is a more frequent affection than we are wont to believe. We recognize the rarer fulminating cases that are usually fatal. Cases subacute, mild in character, and chronic cases are more common. Pain attends these affections. I fully believe, with the additional experience that comes to us, we can recognize this cause of pain.

The problem for solution in these cases of localized pain is to differentiate the various causes, and to recognize if the pain

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\* See Trans. American Congress of Physicians and Surgeons, 1903.

is the expression of a mortal lesion, requiring immediate action to save life. For the former it requires a most careful arrangement and analysis of all the facts in the historic diagnosis, of great importance in qualifying the subjective and objective phenomena; an analysis of the symptoms, a careful elucidation of the objective phenomena and the physical signs, and an accurate estimation of laboratory findings. Alteration of function must be correlated with physical conditions. For the latter, not only must such observations be made, but alertness and unceasing vigil must be not only daily, but hourly, employed, to estimate properly the degree of danger of nature's outcry, expressed in pain. With breadth of view, nicety of observation, and eternal vigilance, the true significance of abdominal pain can be appreciated, human suffering assuaged, and fortunately much oftener than formerly, life saved.

#### THE DISAPPEARANCE OF PAIN.

The occurrence of relief to suffering must not lull us into false safety. Such disappearance may be of diagnostic importance. Apart from termination of the disease in its natural course, such subsidence may be due to the (*a*) onset of gangrene; (*b*) to an oncoming toxemia; (*c*) to both; (*d*) to perforation of a hollow viscus, as the stomach or gall-bladder or appendix, or the rupture of an abscess. If pain disappears suddenly there must be gradual, but prompt, amelioration of all general and local symptoms if the patient is safe.

Pain due to gangrene is seen in appendicitis, and one must be wary lest he be deluded into a false hope by its subsidence. This is all the more liable, as spasm and cutaneous tenderness may subside simultaneously. To exclude gangrene the clinical course of the disease must be closely analyzed: we must observe if the pulse-rate fall, the temperature fall, the expression improve, the tongue become moist, and the mind perfectly clear. Remember, as with gangrene, perforation usually occurs under manifestly the same symptoms. If pain subsides because of the toxemia, an incident in the course of gangrene, its subsidence is more gradual. We must, therefore, appreciate the very slightest suggestive indication in cardiae, respiratory, or cerebral, action, in the temperature, the condition of the skin, and—not readily portrayed, but most important—the expression. I fear many a toxemia has crept on until the patient is within its fatal grasp because of the darkened sick-room.

As evidence of the toxemia, a leukocyte count is of great value. It is probably just as significant when it falls or remains

stationary. You know in pneumonia we look upon a leucopenia with much dread, and so it is in abdominal inflammations if the leukocytes fall or remain at 8,000 or 10,000 it is a more dangerous sign than if they rise, providing there is no improvement locally or generally. Hence, a low white blood-cell count, without improvement in symptoms—and especially of the general symptoms due to toxemia—is very grave. I have seen practitioners relieved when with relief to pain any tumor which had been presented disappeared. It is obvious if such tumor does not rupture into the natural passages, its disappearance bodes great evil. Sometimes a tumor will disappear from one region and appear in another. I was asked to explain the occurrence of a tumor in the left iliac fossa shortly after its disappearance from the right. The original tumor, due to pus, was bound down by adhesions, and so the confined pus took the route of least resistance into the pelvis, around the rectum, and up to the opposite side.

#### PAIN ABSENT IN CONDITIONS WHERE IT SHOULD BE FOUND.

Pain is the earlier, more common, and, from its special characteristics, of greater value than the usual symptoms of obstruction when the closure is slow in progress. The *absence* of pain enables us to decide upon the nature of the lesion. Thus, in a patient of Dr. Riesman's, upon whom Dr. Keen operated for intussusception, the symptoms were favorable until five days after operation, when causeless vomiting, increasing in frequency, began; at first gastric fluid alone was vomited, followed in about four days by the vomiting of the intestinal contents. We give the opinion that the vomiting was due to obstruction of the bowel of paralytic origin. I quote from Dr. Riesman's notes which he has kindly placed at my disposal—the appearances found:

"*Notes of Mrs. U. B.*—Operation to relieve intestinal paresis causing intestinal obstruction. An incision was made on the left side, outside the first incision. On opening the abdomen no fluid escaped, but the hugely distended small intestine at once bulged into the opening. It was drawn out, and its color was found to be bluish purple. The vessels were injected; and the calibre of the bowel that of a man's forearm, or even larger. Peristalsis was not visible, and the intestine dropped upon the table as lifelessly as if it had been that of a corpse. The distension began at about the duodenum and extended far down the intestine, ending abruptly somewhere in the ileum.

At the point at which the distension ended, the bowel was contracted to about the calibre of a finger. This contracted bowel was pale and empty. There were no adhesions, no signs of peritonitis, and no exudate. On opening the distended part of the bowel, enormous quantities of yellowish, fluid, fecal material escaped and ran down upon the floor in a stream. Not a peristaltic wave could be seen. Even after the bowel had been emptied, slapping and hot applications failed to evoke any peristalsis. The colon was of normal color, was somewhat contracted, and contained—especially in the ascending portion—putty-like fecal masses that could be moved with comparative ease by applying the finger externally. The transverse colon was prolapsed as far down as the left iliac region. The sigmoid was greatly elongated. Union had taken place between the upper part of the rectum and the abdominal wall, along the line of sutures."

The absence of pain therefore in cases in which the outer symptoms of obstruction of the bowel prevail is an indication that such obstruction is due to paralysis, from overdistension, from inhibition of nerve influences or from thrombosis on account of which the blood-supply is cut off.

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## BREAD.\*

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BY GEO. G. NASMITH, M.A., PH.D.

Chemist Provincial Board of Health for Ontario.

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The principal functions of food are to supply the body with energy for the work it has to do, and repair the waste continually going on in the tissues. In the production of energy the food is burned in the body just as truly as the coal in a furnace, large quantities of heat, which serves to keep the body warm, being given off in the process. The chief end product is carbonic acid gas, which is the same substance formed when coal or carbon is burned in presence of oxygen.

Every food may be placed in one of three groups, each one of which will supply a definite quantity of heat per unit weight,

\*Read before Canadian Household Economic Association.

and has a definite function in nutrition. Besides these, water and certain salts are essential in nutrition, although in the strict sense of the term, are not foods. These groups are:

1. Carbohydrates,
2. Proteids.
3. Fats.

The carbohydrates, such as the sugars and starches, are fuel, and supply their latent energy to the body when burned in the tissues, just as wood, another carbohydrate, yields up its energy when burned in an engine. The amount of heat required to raise the temperature of one gram of water 1 degree C. is taken as the unit of heat, and is called a calorie. One gram of sugar burned will yield 4,000 calories; in other words, will raise 4,000 grams of water 1 degree C., or 40 grams from the freezing to the boiling point. Carbohydrates are completely burned in the body, no salts being left as residue to be afterwards eliminated.

The proteids, on the other hand, are tissue-formers, and contain nitrogen and sulphur, besides carbon, hydrogen and oxygen. Waste and repair of the tissues is continually going on in the body, by which proteid is broken down and eliminated as carbonic acid, water, and various nitrogenous salts. Carbohydrates or fats cannot replace proteid as tissue-formers. Any-one attempting to live on sugar only, for instance, would soon die, because the nitrogenous elements being absent, the body tissues would soon wear away. Proteid, however, can replace carbohydrates and fats as heat-producers, but if one lived on this alone the quantity of excretory salts would be so great that evil results would soon follow. The proteids include substances such as the white of egg, lean of beef, milk casein, and wheat gluten. -

In animal foods, or food products, proteids are in excess, while in vegetable foods carbohydrates predominate.

Fats are also fuel principles only, and do not replace proteids at all. Their function is closely allied to that of carbohydrates, but not exactly similar. One gram of fat will yield 9,000 calories, or more than twice as much as a carbohydrate or proteid, each of which yield only 4,000 calories; it is, therefore, a very concentrated fuel. An Esquimaux requiring a large amount of heat, can eat quantities of fat which would kill the inhabitant of a more temperate climate.

Now, every diet should contain a proper proportion of these various chemical compounds, and the amount and proportion will vary with the climate, the age of the individual, and the amount of work done by him. The laborer requires more car-

bon than the clerk, because he has more work to do; this extra energy results from oxidation of carbon and hydrogen.

The cereals, and the products derived from them, form the basis of almost all human nutrition, in civilized countries at least; in almost all climates, and in every class of society, bread of some kind is the one food in general use, and forms the nucleus around which almost every diet is constructed.

The various cereals are of much the same composition, but wheat flour makes a better quality of bread than flour from any other cereal, because it possesses a substance, gluten, upon which its bread-making qualities depend, and one obtainable from no other cereal. Oats, maize, or rye, for example, do not contain gluten, and therefore do not make good bread.

If wheat flour be made into a stiff dough, and gently kneaded under a stream of water the starch granules are gradually washed away, and a grey rubbery mass is left, the gluten or gum obtained on chewing wheat. It is this substance that entangles and retains the gas bubbles given off by the yeast organism, so that the mass of dough becomes light and spongy. Gluten is exceedingly plastic and yet to a certain extent elastic; it can be drawn into fine threads or thin sheets. If it be broken in pieces, and thrown into 70 per cent. alcohol, the pieces retain their shape, but are found after some hours to have lost all their elasticity, in fact, are mushy, like starch paste. The alcohol has extracted something which can be thrown out from its solution by strong alcohol or water. The dissolved material, gliadin, is an extremely viscid, sticky substance. The residue is called glutenin. Gliadin is present in the other cereals, such as rye and barley, but glutenin is found only in wheat. It is this combination of gliadin and glutenin in certain proportions which makes gluten, and thus confers a peculiar value to white flour. Gliadin is unaltered by heat, but glutenin coagulates at a temperature of 70 degrees C., therefore when bread is baked, this as well as some of the other proteids of flour coagulate, allowing the bread to retain its expanded state when removed from the oven.

White flour is obtained by grinding up the endosperm of the wheat grain, that is, all of the white inner part left when the bran, or outer indigestible coats are removed and thrown aside.

Whole wheat flour is white flour with some of the inner coats of the bran.

Graham flour consists of the entire ground-up grain.

For all practical purposes, flour may be divided into two kinds, namely, (1) patent; and (2) strong bakers, which is put up under a hundred different names, and is the one commonly

used in the household. The chief differences between them are in the quality of the gluten and color of the flour. Patent flour is very white, its whiteness being largely due to absence of minute particles of bran, found in strong bakers. The proportion of gliadin to glutenin in patent is such that it will expand very highly, therefore yields a larger loaf, absorbs more water, and contains a little less proteid than strong bakers.

Winter and spring wheats both yield these two varieties of flour, but winter wheat flour is very different from spring wheat flour. The former is chalky white, possesses a relatively large amount of gliadin, and makes a small loaf. Spring or fall hard wheat, such as we grow in the West, makes a very large loaf, as the expansive power of its gluten is great. Bakers avail themselves of these properties by mixing the white winter wheat flour with the hard spring to modify the color of flour and character of the gluten in each. Winter wheat flour contains an excess of gliadin, and produces a sticky dough—deficiency of gliadin produces a dough lacking in expansion. A soft wheat may have 70 per cent. of gliadin, a hard Fife wheat only 58 per cent.

In a large modern bread factory, the process of bread-making is essentially as follows: Several barrels of flour are sifted by machinery into the mixer, or kneader, a more or less barrel-shaped iron box lying on its side, and raised several feet above the floor. Through the centre runs an axle, carrying several iron bars, or beaters, parallel to the axis, and capable of being revolved at a high rate of speed. The necessary quantity of water containing the yeast and salt, sugar, shortening with perhaps milk or malt extract, having been added, the cover is placed over the top, and the beaters made to revolve for twenty minutes at about sixty revolutions per minute. Air is blown into the kneader to keep the dough from getting too warm. At the end of this period the dough is found to be wound around the beaters in sheets and strings like silk on a reel, and hanging from the roof and sides in long threads. The dough is then cut away from the beaters, and allowed to fall into steel troughs, where it ferments at 70 degrees F. from six to eight hours, according to the kind of flour used. During this period it is kneaded down several times, and then cut into pieces of the required weight, allowing for evaporation of water which will take place in the baking process.

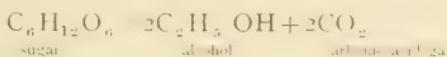
The pieces are then molded, allowed to rise, molded again, placed in pans, and proved for a short time. The prover is merely a steam chest maintained at a high temperature, so that the dough rapidly expands and completely fills the pans. These

are then placed in the oven, scores at a time, and baked for about half an hour at a temperature of 350-400 degrees F. Taken out and rapidly cooled in a free circulation of air, the loaves are ready for distribution.

Mechanically, the process is a simple one; chemically, it is extremely complex.

In the first place, a certain amount of fat, such as lard, cottolene, or milk is added for the purpose of "shortening" the bread; what the chemical action is in lessening the toughness of the gluten we do not know. Perhaps, it is merely a mechanical effect.

Sugar, in the form of cane sugar, brown sugar, dextrose, molasses, or malt extract, is added as food for the yeast organism, since, by giving it plenty of available nourishment, its growth is hastened, and thus the time of fermentation is shortened. The yeast cells distributed throughout the mass of dough find themselves in a suitable medium with plenty of food material at hand, and with an agreeable temperature; they immediately begin to grow by a process of budding, and seizing upon the surrounding sugars and soluble starches, convert them into alcohol and carbonic acid gas.



The gas cannot escape, being entangled in the gluten, and, forming tiny bubbles or pockets, which increase as the yeast cells continue to grow, the whole mass becomes light and spongy, and swells up. The dough is then "knocked down" by kneading, the gas escapes, and the yeast chains are broken up and brought into contact with more food material; thus multiplied activity ensues, since each yeast cell has given rise to several more.

This process of rendering the dough porous is an extremely important one, but may be imitated by means of baking powder, or by mixing the dough in a machine with gas under high pressure—the aerated method. Another process goes on, however, which we cannot as yet imitate, namely, the softening and change in the composition of the gluten, and the development of the peculiar flavor of bread. The yeast cell, in its growth, requires a certain amount of proteid as food, and in some way, possibly by excretion of a ferment, it modifies the quality of the gluten, so that the resultant loaf is very different from one made by the use of baking powder, or the aerated process.

Yeast works best at a definite temperature (about 70 degrees

F.), and during its growth prevents the growth of other organisms, especially the omnipresent bacteria. If the temperature rises too high, or falls too far below this optimum temperature, or if the yeast has exhausted all its available food, then bacteria begin to grow.

Compressed yeast, such as Fleischmann's, is an almost pure culture of a specific variety, but with it are always associated wild yeast and bacteria. For all practical purposes, it is a pure culture, but from an ordinary specimen, I have isolated five distinct species of wild yeast and numerous bacteria. There are, therefore, these wild yeasts and bacteria, besides various bacteria from the flour, water, and other ingredients, as well as those in the air to start with. Doubtless, a good deal of the delicate flavor of fermented bread is due to the activity of these organisms. Every species of bacterium has a definite kind of work which it prefers to do; thus some live on dead matter (saprophytes), some live on living tissue (parasites); some attack carbohydrates, others break up fats or proteids. These organisms are held in check, or are crowded out largely during the rapid multiplication of the yeast, but do propagate somewhat. Just as soon as the yeast, however, has become exhausted or used up all available food, bacteria begin to multiply, and sour bread results. The lactic acid bacillus usually starts, and as soon as it is exhausted, butyric acid and other bacilli begin, producing a very offensively smelling mass. The speed with which this occurs is sometimes astounding, but when one considers the rapidity with which bacteria grow, it is not to be wondered at. A great many bacilli split into two every half hour. Take one and see what that will come to in twelve hours, or twenty-four half hours. At the end of one half hour there will be two, in the second half hour, four; in the third, eight; in the fourth, sixteen and in the twenty-fourth the sum of 19,154,432, so that you see with a few million to start with, all waiting for an opportunity to multiply, great damage can be done in a very short time. Fortunately, they do not continue to multiply at this rate very long, as they are paralyzed or killed off by the poison of their own activities.

A glass slide rubbed over with a swab from the throat of a diphtheritic patient, will, when examined under the microscope, often not show the presence of more than a stray diphtheria bacillus, often none at all, and yet when the same swab is rubbed over the surface of sterile blood serum, its surface, twelve hours later, will be covered with literally billions of diphtheria bacilli. I have emphasized this point to try and impress upon you the

tremendous amount of work these individually tiny organisms are capable of doing in a very short time.

Like human beings, bread is subject to some diseases, particularly in unclean bake shops. Ropy bread, due to the entrance of a bacterium after baking, is occasionally found. Sometimes red spots appear, due to the growth of a red color producing bacterium; its appearance in mediæval times sometimes produced consternation, as auguries of things to come, or even resulted in the sudden demise of the unfortunate baker.

Wheat bread is probably more nearly a perfect ration, and is capable of maintaining life longer, than any other single food, because its tissue-forming constituents (the proteids) and its energy-yielding portion (the carbohydrates) are more nearly in the proportions demanded by the system from a normal diet.

The body requires, per diem, about 100 grams proteid, 50 grams fat, 450 grams carbohydrate. Bread consists of 9.2 grams proteid, 1.3 grams fat, 53.1 grams carbohydrate, 35 grams water in 100 grams. So that, to obtain the requisite amount of proteid, one would have to take  $100 \div 9.2$  times 100 grams bread per day. But, since only 85 per cent. of the proteid of bread is digestible, one would have to take  $100 \div 85$  times this quantity, or about 1,300 grams. This would yield 100 grams proteid.

$$\begin{aligned}1.3 \times 13 &= 17 \text{ grams fat.} \\53.1 \times 13 &= 690 \text{ grams carbohydrate.}\end{aligned}$$

or about 35 grams too little fat and 240 grams too much carbohydrate; but as fat can, to a considerable extent, be replaced by starch, a diet of bread alone would give about 170 grams (about 6 ounces) too much carbohydrates. We have instinctively recognized these facts by eating bread with butter, a fat; or combining it with milk, which contains much proteid and fat; or with cheese, which is proteid and fat.

Brown breads, such as whole wheat or graham, are inferior to white bread as food, in that they contain less available nutrient weight for weight than it does. Text-books, medical men, and lately patent food makers, reiterate the statements disproved years ago, that the best part of the wheat grain is milled out and thrown away as bran. There is absolutely no scientific foundation for the claims of the whole wheat faddist, all the evidence being in favor of the white bread.

If you take a pound of brown bread, containing, say, half an ounce of bran, and a pound of white bread, the value of the brown bread as nutriment is less by the amount of bran present.

It is true that whole wheat flour contains more proteid than white flour, but we live not by what we eat, but by what we digest. If we could digest anything, then the cheapest way to get our carbon would be to eat coal or wood, and our nitrogen from crude ammonia or ammonium sulphate. We cannot do this, neither can we digest the cellulose walls which surround the proteid contents of the aleurone cells of the bran, and the enclosed substance is just as securely locked away from us as is the carbon of coal.

An ox can live contentedly for weeks on hay and bran, which are both largely cellulose or woody fibre, but a human being can digest practically none of it.

I have digested thin sections of wheat for days with artificial gastric juice, and found the contents of these cells unaltered when examined under the microscope. Experiments have been made on human beings with precisely similar results. As to the loss of iron and phosphates of the bran (a loss so magnified by the proprietors of whole wheat food factories), it has as yet not been proved that we require abnormal quantities of these salts. In fact, the quantity in white flour is sufficient to maintain equilibrium of these salts in the body. Almost every food we eat contains plenty of the various salts, so that the body receives plenty from other sources.

There is no such thing as a special food for brain or nerves. Do not believe the advertisement on the boxes of patent food. You cannot get more from wheat or other cereal than you started with. The food manufacturer may make good digestible material, but it is no better, and may not be as good, as the original. One does not think of eating the shell of a walnut, or the skin of a banana, because it grew there, or because of the salts present, and why should one eat bran, even if the patent food manufacturer claims that the Creator attempted to make a perfect food in the whole wheat grain.

It has been found by numerous experiments on human beings that there is not as much food absorbed from whole wheat or graham bread as from white. So many experiments have been made, and in so many different parts of the world, by Rubner, Voit, Meyer and the various experimenters in United States scientific laboratories, with the same general conclusions, that the evidence must be accepted as final.

In the United States a number of men, from college athletes and students to hard-working teamsters, were experimented upon with bread diets, and by actual accurate physiological chemical

methods, it has been invariably found that more available nutrient was yielded to the body from white, than from graham flour breads. An average of many experiments gave:

	Digestible Protein	Digestible Carbohydrate
White bread.....	85 per cent.	97 per cent.
Whole wheat bread.....	80.5 "	94 "
Graham bread.....	77.9 "	88 "

Not only does graham flour yield 7 per cent. less of its protein to the body, but its branny particles, by irritating the intestinal muscles, promote peristalsis, and hastens other food more rapidly through the alimentary tract, so that complete absorption cannot take place. Of course, in persons of sedentary occupations, or in those subject to constiveness, this increased peristalsis may be of great benefit, and many people find the use of brown breads beneficial for this reason. As with all other foods, eat what you find agrees best with you, and avoid what does not. It is literally a fact that a normally wholesome food, such as milk or eggs, may actually prove poisonous to certain individuals.

The working man always has endorsed the white loaf, not as the great physiologist, Bunge, imagined, from a perverted instinct, but because he finds he can work better on it. Less than 15 per cent. of the bread used in Toronto to-day is brown bread.

With reference to the question of so-called pre-digested foods, allow me to say a word on appetite. Pawlow, the great Russian physiologist, in his work on digestion in dogs, during a period of ten years has obtained exceedingly instructive results. By observing strict antiseptic precautions in laboratories equipped primarily with this object in view, they have been able to perform surgical feats hitherto found impossible. The animals operated on in some cases were kept alive and well for several years.

By means of a double incision a flap of stomach wall was turned over with all its nerves and blood vessels intact. The opening was then sewn up, and the flap converted into a second miniature stomach, with its opening to the outside of the body; it had no connection with the original stomach, but when the original stomach received impressions, it received them also. Thus secretory experimental effects could be readily studied.

When food was taken into the large stomach, the small stomach acted as if still part of it, and secreted gastric juice.

which could be collected and measured. For instance, experiment showed that for 100 grams of flesh eaten, 26 cubic centimetres of gastric juice were secreted by the small stomach; for 200 grams, 50 c.c.; for 400 grams, 106 c.c. In other words, a quantity of gastric juice was poured out exactly proportional to the amount of food to be digested in the stomach.

Every individual food was found to call forth a particular activity of the digestive glands; that is, the amount of digestive juice varied with the kind of food. For instance, the digestive power of "bread juice" contains four times as much ferment as "milk juice," and three times as much as "milk juice." That is, the different kinds of protein receive quantities of ferment corresponding to the differences in the digestibility of their protein. The extra demand is supplied by a more concentrated juice, in order that an excess of hydrochloric acid may be avoided.

Appetite, they found, was the great factor in the flow of gastric juice. The gastric glands begin to secrete, if one is hungry, a few minutes after food is seen or smelt. It is a nerve impulse from the brain which causes the glands to secrete, when the brain itself is stimulated by the sensory nerve endings of the nose or mouth. When one is not hungry, this secretion is not called forth, nor is it if food be placed in the stomach unknown to the subject (dog), with the exception of flesh or fleshy extracts. The latter and water stimulate secretion directly. This initial secretion does not last very long, but it is ample to start a vigorous peptic digestion; then the products of digestion themselves stimulate the glands to renewed activity, and the food is all reduced to a semi-fluid condition. Mechanical or chemical stimulation does not cause a flow of gastric juice, but the desire for food does. We are, therefore, justified in saying that appetite is the first and mightiest exciter of the secretory nerves of the stomach.

The value of appetite was shown graphically by Pawlow in the following experiment. Weighed pieces of meat were introduced through a fistula into a dog's stomach unknown to him. Similarly weighed pieces were introduced into the stomach of another dog after sham feeding (the food eaten by the dog dropped out of an aperture left in his esophagus; he experienced all the pleasures of gastronomy, and would eat in this way for hours without becoming satiated). Both were withdrawn after one and a half hours; the latter had lost thirty grams in weight, the former only six grams. The difference was due to appetite.

juice alone, or the digestive value of the passage of food through the mouth, the value in short of an appetite.

Now, when food is taken without appetite against the will, or in indigestion, this initial secretion does not take place, and the food may lie in the stomach for hours before digestion sets in—a prey to bacterial fermentations. When long continued, this may lead to chronic disease of the mucous lining of the stomach. So you see that as Pawlow puts it "appetite is juice," and the truism that "good digestion waits on appetite" has only of late years received scientific confirmation.

Since meat extracts and water alone stimulate these glands to activity, the use of soups at the beginning of a meal has now received a scientific explanation and endorsement.

The reason that bread proteid is four times as difficult of digestion as milk proteid he found to be due to the fact that the vegetable proteid was so largely diluted with starch. He proved this by making an artificial bread, using the proportions of flesh proteid and starch which are found in bread. The juice poured out on this artificial bread was of exactly the same strength as that on ordinary bread. The precision of these glands is remarkable, and is one example of how exactly nature adapts herself to the work in hand.

As the semi-fluid food passes on into the intestine, it stimulates a secretion of pancreatic juice, which again is proportional to the amount of food to be digested.

In this sketch, I have endeavored to give an epitome of our knowledge of the subject of bread in its various aspects, without attempting to go too fully into details. The subject of food investigation is a slow, laborious and costly one, and one we are but now beginning to realize the value of. It has already been the reason for the origin of domestic science; there could be no domestic science without the data and precision of fact supplied by the laboratory.

The disease and suffering in the world from mal-nutrition, and lack of knowledge of the preparation and uses of foods, is probably greater than from any other source. With advance of the knowledge of the principles which govern nutrition this condition ought to steadily improve, so that, in a few decades, indigestion, with its accompanying train of diseases, may practically be matters of history.

## THE LITERATURE OF TUBERCULOSIS AT THE TUBERCULOSIS EXPOSITION IN BALTIMORE.

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The Tuberculosis Commission of Maryland, appointed by the Legislature in 1902, brought their labors to a very successful close by uniting with the Board of Health, and jointly presenting to the public and the profession the results of their work in a most tangible form, an object-lesson of great value. For by means of charts, diagrams, photographs, models, literature, and an immense amount of other material, the whole subject of tuberculosis, its history, distribution, varieties, causes, cost, prevention and cure, was placed before them.

Reports of the Exposition have appeared in all our medical journals, and the addresses made will doubtless all appear in due course. Every department was complete and full of interest, but of particular interest was the collection of books and portraits covering the history of tuberculosis. Much credit is due to Dr. Osler, Dr. Jacobs and Dr. Futcher for their efforts in collecting and arranging this department of the Exposition, for it was doubtless one of the most complete of its kind ever brought together.

In the department of literature, first in chronological order were the writings of Hippocrates (460-377 B.C.), represented by two volumes of the Latin "Editio Princeps" of 1525, the first lying open at his description of the form of chest in tuberculous patients, the second at the page when he describes pulmonary tabes (phthisis). Then the description of phthisis written by Aretaeus, the Cappadocian (250 B.C.), one of the most graphic in literature. Galen's (131-200 A.D.) "Methodus Medendi" lay open at the page where he so strongly recommended a milk diet and dry air in the treatment of phthisis. The description of the varieties of consumption so well observed by Celsus (30 B.C.-50 A.D.), was to be read in the "Editio Princeps" of 1479, while his treatment of the disease was to be read from the open pages of "De Medicina," where he strongly advocated a change of air and long sea voyages. In the works of Franciscus Sylvius (1614-1672) was the first accurate description of tubercles in the lungs. Some splendid plates of the gross appearances of the

disease were exhibited in Gideon Harvey's "Morbus Angiens," published in London, 1672, the work being quite superior to much of that appearing in our modern text-books.

John Brown's "Adenochiradologia" could not but attract attention, being a complete exposition of the king's evil or scrofula, and its method of treatment by the royal touch. At the end of the book appears a list of the number of patients touched during the years 1660-1682, a total of 92,107.

The writings of the celebrated Sydenham (1624-1689) lay open at his description of the riding cure. He certainly believed in vigorous exercise, and maintained that he saved several phthisical patients through horseback riding.

Richard Morton's works were represented by a first edition, (1689), and a second edition (1720) of his "Phthisiologia," in which he recognizes the identity of scrofula and tubercle. He was one of the first English authors to lay stress on the contagiousness of phthisis.

The first recorded attempts at inoculation were shown in Kortum's "Commentarius de Vitio Scrofulosa" (1789), where he cites his experiments in rubbing scrofulous matter into the neck of a boy, with a negative result. Kortum was the first to compare tuberculous matter to fresh cheese.

One large case was almost filled with various editions of Lænnec's works, amongst them being a first edition of his immortal "L'Auscultation Mediate," published in two volumes in 1819. In this was illustrated his stethoscope, the introduction of which marks a new era in physical examination of the chest. Most interesting in connection with this collection of Lænnec's works and his illustrations, was a stethoscope which had been used by the master himself, and brought to America in the early part of the nineteenth century. It was loaned by Dr. V. Y. Bowditch, of Boston, who also exhibited the instrument case used by his father, who first advised and practised thoracentesis, containing a varied assortment of trocars and cannulas, and all the instruments used in aspiration.

One edition of Lænnec lay open at his description of the miliary nodule, and another at his statement of the unity of tuberculosis. He believed in the curability of the disease. Whether he believed it to be contagious cannot be definitely said from his writings, but he himself was accidentally inoculated while performing an autopsy on a tuberculous subject, and died of consumption twenty-four years later as a result of this infection.

One of the first to introduce to America the physical means of diagnosis of diseases of the chest as taught by Laennec, was Samuel George Morton (1799-1851), whose "Illustrations of Pulmonary Consumption," published in Philadelphia in 1834, was the first important treatise on the subject on this continent. "It will always stand as a monument of his industry and accuracy, and a credit to American medicine." This volume was very remarkable for the accuracy of its plates, and for the beauty of their coloring. His conclusions regarding the nature of tubercles were extremely accurate.

Robert Carswell's "Morbid Anatomy" (London, 1838), showed also a splendid series of figures and plates, illustrating the racemose distribution of the tubercles.

Bodington's "Essay on the Treatment and Cure of Pulmonary Consumption," London, 1840, is the first work which outlines accurately what is now known as sanatorium treatment. This he advocated very strongly, carrying it out himself at Sutton Coldfield, in Warwickshire. He was really a predecessor of Brehmer and Dettweiler, but his writings were not taken seriously, and only after the great success of the sanatorium in Germany did English physicians recognize that one of their own number had been advocating the same line of treatment years before. This essay has been recently re-printed by the New Sydenham Society.

There was a second edition (1843) of Louis' "Recherches sur la Phthisie," one of the most thorough studies of pulmonary consumption, subsequently translated by Henry J. Bowditch. It had an important influence in introducing proper methods of study of pulmonary tuberculosis in this country. Dr. Osler's note on this book directed particular attention to page xx. of the advertisement, containing Louis' statement of the advantage of the numerical method as applied to medicine, a method the importance of which was first recognized by Louis, and to which we owe much of our present knowledge of disease.

Another volume, the name of which could not but attract attention, when the date was considered, was Wm. A. McDowell's "A Demonstration of the Curability of Pulmonary Consumption in all its Stages," published at Louisville, Ky., 1843.

The first accurate description of the histology of tubercle was that of Addison—this was to be read in his original communication to Guy's Physical Society in 1845.

Klucke's observations, published 1843, were interesting in that he was the first observer to definitely state that tuberculosis

is inoculable, and to have successfully made experiments supporting this. The production of tubercle by injection of foreign matter was observed by Cruveilhier, and his paper published in 1826 showed his systematic inoculation experiments with mercury into the veins, tubercles resulting in the lungs, liver and mesentery.

Of greater significance were the writings of Villemin, his "Etudes sur la Tuberculose" (1868), and his original communication of his demonstration of tuberculosis being a specific infectious disease, presented to the Paris Academy of Medicine, December 4th, 1865. This communication startled the whole medical world, and was very reluctantly accepted until the specific cause was discovered later. Though Villemin was unaware of this specific cause, he fully recognized that the source of the infection was tubercular matter, particularly the discharge from tubercular areas. The following translation of a part of his conclusion seems little short of wonderful, when read in the light of our modern knowledge: "Now that we know the nature and intimate cause of tuberculosis, that we can produce it at will in animals, does not the future open out before us a plenitude of consoling hopes? . . . . From the many and repeated experiments upon animals, which we cannot make with man, may we not look for some results . . . . and what immense results would emanate from a neutralizing agent applied at the beginning of the malady, and destroying in the organism the morbid principle there multiplying. For the danger of phthisis is not in a few tubercles which interfere often so little with the respiratory functions that the patient ignores their presence, and that careful auscultation scarcely reveals them, but in the impregnation of the whole economy with the pathologic substance which results in successive outbreaks of tuberculosis of greater or less frequency and severity, which lead inevitably to death. Such are the ideas which should guide us in the search for prophylactic and curative measures against tuberculosis. Such are the hopes raised before our eyes by our discovery. May it bear in the future the fruits that our fancy pictures."

There was also Kleb's communication citing his feeding experiments on animals with tubercular material.

The new Sydenham's Society's translation of Felix von Niemeyer's "Clinical Lectures on Pulmonary Consumption" (London, 1870), was very interesting reading in the chapter on treatment, though the pathological teachings of Niemeyer had a most pernicious influence, based as they were on his ideas that pulmonary phthisis with cavity formation was the result of an inflam-

matory process, a chronic catarrhal pneumonia, and that tubercles if also found in the lungs developed themselves at a later stage of the disease, and did not precede softening and excavation. His treatment was very sound, advocating rest for pyrexia, fresh air at all times, and recognizing the value of the modern sanatorium regime in this sentence (the italics are his): "The chief point, under all circumstances, is that the patients, wherever they may be, live prudently, and be under the care of an intelligent and firm physician."

Almost hidden in a corner of one case, and very inconspicuous in its appearance, though quite entitled to have its inscription in red and gold was the *Berliner Klinische Wochenschrift*, of April 10th, 1882, containing Koch's memorable and epoch-making communication of March 24th, which covered the whole ground of the causation of tuberculosis, and gave us our first description of the tubercle bacillus, and so thoroughly worked out that it has been often remarked that the succeeding twenty years have scarcely added anything further than to confirm Koch's findings, and this seemed to be the opinion of the Committee in Charge of Literature, for though case after case was filled with the works of writers previous to Koch, one case contained the works of those more recent, amongst which were the writings of Knopf, Latham, Bridge, Flick and others.

The popular side of the subject was well represented by many essays written for the lay reader, particularly striking being a large collection of the various translations into foreign languages, some twenty-seven in number, of Knopf's Essay on Tuberculosis, which received the prize of the Berlin Congress.

In the case of modern works and pamphlets were the reports of the various International Congresses, as well as copies of the current publications devoted to tuberculosis: *La Revue de la Tuberculose*, *La Lutte contre la Tuberculose*, *Zeitschrift fur Tuberculose und Heilstattenwesen*, *Tuberculosis Infantile*, *Tuberculosis* (London), *Tuberculosis* (Deutsch Cent. Com.), *Journal of Tuberculosis* (since discontinued), and *La Tuberculosi*.

One could not but wish that the essays of Brehmer and Dettweiler had been procurable.

The collection of photographs and engravings of the various workers and writers was not as complete as the Committee had at first intended, but was nevertheless very interesting, comprising the following: Hippocrates, Celsus, Galen, Laennec (1781-1826), Louis (1787-1872), Broussais (1772-1838), Andral, Benjamin Rush (1745-1813), James Jackson, Jr. (1810-1834), Samuel George Morton (1799-1851), Austin Flint

(1812-1826), Henry Ingersoll Bowditch (1808-1882), Wm. W. Gerhard (1809-1872), Koch and Cohnheim.

Particular mention must be made of a loan from Dr. Knopf of the photographs and autographs of Brehmer, Dettweiler and Trudeau, "The Three Pioneers of Sanatorium Treatment," three noble men whose lives have been spent for others, and two having themselves been stricken with the disease, and after regaining health, devoting their energies to the permanent establishment of institutions for the more needy classes, laboring under great difficulties, and forming excellent examples of the oft-repeated saying that the world's greatest work is done by invalids.

This short sketch has been written from a few notes made while at the Exposition, in hopes it may be of interest to some who were not privileged to attend. It covers only one department of many, all of which were as complete as this.

GRAVENHURST, March 15th, 1904.

## Clinical Reports

### REPORT OF CASES.\*

BY H. B. WILKINSON, M.D., SARNIA, ONT.

#### FRACTURE OF HUMERUS—ANATOMICAL NECK.

Male, aged 46, with a negative family history. One brother had fracture of humerus, with permanent wrist-drop. Met with the following accident: February 24th, 1903, he slipped through a hole three feet in diameter in going down a stair from sidewalk to a platform twelve feet below. In trying to save himself he thinks he struck the inner surface of his arm on the edge of the opening. When he regained consciousness, he was lying on his right shoulder on the platform below, and had lost the use of his right arm. No pain unless arm was moved. When he allowed the arm to hang down there was severe pain in the shoulder, and extending down the arm. No pain when the arm was supported. He crossed the river in a small boat, and went to Dr. Bell's office, who found the following condition: Pain referred to the shoulder joint when the arm was moved; from

\*Lambton Medical Association.

the acromion process to condyle of humerus, same both sides. Vertical circumference of shoulder joint increased two metres on right side. No visible deformity. Under chloroform, and slight traction upon arm, the head of humerus moved outward, but not with the sensation of a reduced dislocation. He felt quite easy if slight traction were made. Arm practically paralyzed, wrist drop complete, no radial pulse. All measurements normal. I saw him at this stage and found fracture of anatomical neck of humerus in position. No pulsation in the artery until reaching the middle axillary, where the dividing line was as abrupt as if it had been ligatured at that point. Complete paralysis of muscles supplied by the musculo-spiral. Sensation slightly improved. With the X-ray the same evening, Dr. Logie found humerus in perfect position. The shadow of shoulder was darker, but nothing could be discovered to account for symptoms. February 24th, we gave him a thorough examination under complete anesthesia. Length and vertical circumference normal, position normal, crepitus present; with a finger on each side of the axillary artery it could be traced from above to the occlusion, but nothing abnormal could be felt. The bone was smooth and an inch away. Usual fixation for twenty-four days. Good union. Motion and sensation good, except the distribution of the musculo-spiral. April 7th, thirty-four days after injury, we thought it best to explore the seat of injury to artery and nerve. In the presence of Drs. Newell and Bell, I cut down and found a triangular piece of bone half an inch each way, and as thick as thin card-board, driven into the artery about one-third of an inch. At the point of occlusion, at the same level and by a similar piece of bone, the musculo-spiral nerve was severed for half its diameter. No other fragments. The callus could be felt. The spiculae were removed. No hemorrhage from the artery. No attempt was made to repair the nerve. It was thought that the fibres intact were a better connecting link than could be made.

Three days after injury both galvanic and faradic currents gave normal reaction. March 20th to the day of operation, electrical reaction nil. He was treated with massage and galvanism until June 15th, when the muscles reacted to the faradic current, and first voluntary movement took place, which current was used for several months. He has almost perfect use of the forearm.

#### OVARIAN CYST.

Mrs. L., aged 84. For several months has complained of pain, vomiting and enlargement of abdomen. Pain gradually became so severe that she could not lie down. Physical exam-

ination: Classical signs of ovarian cystoma, large as a seven months' pregnancy. Had her removed to the hospital, where Dr. Johnston saw her. He confirmed the diagnosis, and remarked that the centre of the abdomen was very prominent. Removal decided upon. While using vessel after a preparatory enema, she had a sudden pain in abdomen; became blanched and pulseless. When Dr. Johnston and I saw her a few hours afterwards, we found the prominent abdomen was flat, and the usual signs of ascites present. Diagnosis—rupture of sac. We waited a few days; when our diagnosis was confirmed on the operating table. She made a very smooth recovery. One year afterward she died of acute intestinal obstruction.

#### LIGATION OF THE COMMON CAROTID.

Female, aged 49. From early childhood has had an angioma of left side of face, from lower lid to chin, and involving roof of mouth to such an extent that only semi-solids and liquids could be used. Pulsation strong and painful; superficial vessels on the nose were as large as the radial. She has had numerous and severe hemorrhages. In 1897, ligated the facial, as pressure as it curves around the lower maxilla gave relief. The artery degenerated at the seat of ligation, and formed an aneurysm. In 1902, she demanded further relief. I ligated the common carotid in the usual situation. She has had almost complete relief of symptoms. Did not suffer any inconvenience from the ligation. The roof of the mouth has decreased in size so she can use her food to much better advantage. I used kangaroo tendon to ligate the vessel. She is relieved of the painful pulsations entirely.

#### THALMA'S OPERATION, OR SHORT CIRCUITING THE RETURN CIRCULATION IN HEPATIC CIRRHOSIS.

Male, aged 46; saloon keeper; steady drinker for years. Family history negative. For two years he has had progressive symptoms of cirrhosis of the liver. Four hemorrhages from stomach; vomiting; progressive anemia; anasarca of lower extremities; ascites. He had been tapped four times. Urine scant; bowels regular and normal color. When I first saw him on August 20th, the circumference of abdomen was fifty-six inches; dyspnea marked. I tapped him on August 22nd, and drew off a large quantity of light-colored fluid, and found liver very much hypertrophied. His general condition improved after tapping. Dr. Harvey saw him in consultation. We decided to give him the benefit of Thalma's operation

on August 30th. The following was done: A median incision immediately below umbilicus, extending downward four inches, after drying the abdominal cavity. The parietal peritoneum on each side of the incision was stripped from the abdominal wall for about three inches, and the omentum tucked into these pouches, and stretched there with cat-gut. The abdominal wound was closed with silk-worm gut. The ascites increased as rapidly as before, until the abdominal circumference was forty-four inches, beyond which point it did not increase. The urine increased in quantity. He had very little anasarca of limbs. The anemia persisted, and he died from asthenia on October 25th. From the literature and the improvement, I think he would have received much benefit from an early operation. This operation is best suited to the hypertrophic form of cirrhosis.

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### Selected Article

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#### GONORRHEAL INFLAMMATION OF JOINTS.

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BY A. E. HALSTED, M.D., CHICAGO, ILL.

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Gonorrhreal inflammation of the joints, or gonorrhreal rheumatism, was recognized clinically before it was known that the gonococcus of Neisser was the essential cause of the primary disease. The earliest explanation of the occurrence of metastatic joint affection in gonorrhea was that it was the result of a toxic product of the gonococcus acting upon the joint capsule, rather than the gonococcus itself. Of late years many observers have found this micro-organism in the synovial fluid, and there no longer exists any doubt that in all cases of gonorrhreal rheumatism the gonococcus exists in the joint, although its presence cannot always be demonstrated. Nasse, after a most careful and systematic examination of thirty cases, found the gonococcus in nineteen only. Walter Rindfleisch, in 1897, was able to isolate the gonococcus in twenty-seven of thirty-two cases of gonorrhreal arthritis.

In the fluid aspirated from a joint the seat of a gonorrhreal inflammation the gonococcus may not be found. Those that are present in the fluid are usually dead and no longer capable of producing a growth in a culture medium. The micro-organism

is found most frequently in the leucocytes or in the endothelial cells of the joint capsule, which are quickly deprived of their vitality, and the latter are then desquamated. When disintegration of the infected cellular elements is complete, the effused fluid in the articular cavity, possessing some bactericidal properties, ultimately destroys the germs. For this reason, when searching for the gonococcus, attention should be directed principally to the recently detached endothelial cells and to the leucocytes, rather than to the fluid itself.

As a rule, the symptoms of joint metastasis come on late, but in a few they develop immediately after the infection of the urethra. The process seems not to depend upon the extension of the disease to certain parts of the urethra, but rather on the involvement of the deeper parts of the urethral mucosa. It must also be remembered that infection of other regions than the urethra with the gonococcus may lead to gonorrhreal arthritis.

In the female, infection of the vaginal, cervical, uterine or tubal mucous membrane may give rise to metastases as readily, provided the deeper layers are involved, as the urethra.

It has also in numerous instances been demonstrated that gonorrhreal conjunctivitis may be complicated by infection of the joints with gonococci. Clinically, gonorrhreal inflammation of joints may be grouped as follows:

1. Acute serous synovitis.
2. Acute sero-purulent synovitis (mixed infection).
3. Purulent synovitis (usually mixed staphylococcus and gonorrhreal infection).
4. Sero-fibrinous or the sero-membranous, of Ollier, where the fluid is present in small amount, or has the consistency of coagulated serum or is gelatinous. This is often associated with a proliferative synovitis, and defects in cartilage from prolonged inflammation. This form may be from the beginning subacute and not associated with severe pain, as is common in the other varieties. Not infrequently a considerable degree of peri-articular inflammation is coincident.
5. The peri-articular, ankylosing inflammation, with practically no fluid in the joint cavity. In this group we have a low grade of inflammation, closely simulating arthritis deformans, and usually associated with considerable pain, marked muscular atrophy, and pronounced anemia. The temperature may be but slightly above the normal at any time. This, with the muscular atrophy, the anemia, and the spindle-shaped joint, may present a picture that simulates tuberculosis.

In the simple serous synovitis the changes in the joint are

very slight. The capsule, although the seat of an acute inflammation, is not materially thickened, and if the proper treatment is early instituted, the joint will regain its normal condition. In these cases the chief danger is that mixed infection with some of the ordinary pus microbes, particularly the staphylococcus, will occur. In such case we have the symptom-complex rapidly changed. The temperature increases; the pain becomes greater; the swelling becomes more pronounced, and the patient's general condition becomes distinctly septic.

In the milder degree of mixed infection the character of the fluid in the joint may not materially change. In the early stage it may be but slightly turbid. Later it becomes distinctly purulent, in which case the disease takes on the characteristics of a suppurative arthritis, with all the local changes in the joint, and the manifestations of general infection that are so well known.

In the sero-fibrinous or sero-membranous form there exists from the beginning a subacute inflammation which may closely simulate syphilitic and tubercular arthritis. In this form comparatively little fluid is found in the joint. The thickening of the articular structures, with the marked peri-capsular infiltration, may lead the surgeon to suspect fluid, but on opening the joint a thick gelatinous material, closely adherent, like a membrane, to the capsule, is all that is found. The cartilage is generally eroded more or less, the ligaments infiltrated, and the capsule thickened. Between the capsule and the fascia and the ligaments a fibrinous exudate is found. This exudate, with the infiltration of the articular structures gives the swollen, tense appearance to the joint which can readily be mistaken for an intracapsular serous exudate.

The diagnosis of gonorrhreal arthritis is often difficult to make. In acute serous gonorrhreal synovitis the disease may be mistaken for acute articular rheumatism. This is particularly true when the disease is polyarticular. In the majority of cases gonorrhreal arthritis is limited to one or two joints; in the male, to the knee or ankle; in the female, more frequently to the wrist or elbow. The hips, small joints and vertebral articulations are infrequently involved. The disease is often ushered in with a chill, which is not common in articular rheumatism. Sweating, which is so characteristic of rheumatism, is not a prominent symptom of gonorrhreal arthritis. The pain in most cases of gonorrhreal synovitis is more acute, and does not yield as promptly to the administration of salicylates as it does in rheumatism. Muscular atrophy, ankylosis and deformity are more common in the protracted cases of gonorrhreal synovitis than in

muscular rheumatism. Endocarditis, although it may be a complication of gonorrhreal inflammation, is not as common as in articular rheumatism.

The most important factor in the diagnosis of gonorrhreal arthritis is the presence of the gonococcus in the secretions of the urethra, vagina or uterus. In many cases, in the male, the presence of a discharge, or history of a recent attack of gonorrhea, will direct attention to the nature of the infection. As gonorrhreal synovitis is probably the most common of the acute joint inflammations, too much stress cannot be laid upon the importance of a careful inquiry into the venereal history of patients suffering from acute arthritis.

In the sero-fibrinous or sero-membranous group the history of gonorrhea, or the presence of the gonococcus in the secretions of the genital mucous membrane, must be relied upon to differentiate this form of the disease from tuberculous and from syphilitic joint disease. The chronic ankylosing form often closely simulates arthritis deformans. The presence of a chronic urethral discharge will go far toward clearing up the diagnosis. It must be borne in mind, however, that what is now considered true arthritis deformans frequently follows acute gonorrhreal arthritis.

The treatment of gonorrhreal rheumatism differs according to the type of the disease that is presented.

In the acute serous synovitis, if the case is seen early before the effusion is great, rest and pressure, best accomplished by the application of a plaster cast, have given the best results in my hands. If the effusion has already become very great, immobilization of the joint by a suitable splint and the application of ice gave the most relief.

I do not agree with the writers who claim that the salicylates do no good in this disease. On the contrary, I use large doses of salicylate of soda, and have had good results follow. When the effusion is large, I always aspirate the joint, and fill the cavity with a 1 per cent. solution of protargol. Having used this treatment for three years, I can heartily recommend its trial.

After the fluid has been removed and the protargol solution injected, it is better to secure immobility of the inflamed joint by applying a plaster-of-Paris cast for a week. After the condition of the joint warrants it, massage and passive motion are employed.

I would strongly advise the diagnostic puncture in all cases of acute synovitis. In case a mixed infection can be demonstrated, or where the fluid is sero-purulent, or purulent, it is

advisable to resort to arthrotomy and drainage at once. In these cases, as soon as the joint infection has been controlled, massage and passive motion should be employed to preserve a functionally useful joint.

In the sero-fibrinous or membranous arthritis, early arthrotomy, with lavage of the joint and subsequent massage and passive motion, give the best results.

In the chronic ankylosing form, when the disease is mostly confined to the ligaments and peri-articular structures, massage, super-heated air and passive and active movements will accomplish more than operative treatment.—*Int. Jour. of Surgery.*

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## Therapeutics.

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### Notes on the Treatment of Pneumonia.

W. Gilman Thompson (*Journal of the American Medical Association*, March 19th, 1904), says:

It is best to give alcohol to the extent of from four to six ounces of whiskey or brandy in the twenty-four hours—seldom more than this. Many patients do best without it, but with a feeble dicrotic pulse, a dry tongue and a profoundly asthenic condition, it is indicated as above.

In the delirium of pneumonia, trional is a very safe, non-depressing remedy in moderate doses (grs. xv.-xx.), a remedy which acts particularly well in conjunction with codeia.

*Oxygen Inhalation.*—In many cases it is certainly of doubtful utility and fails to make any impression on either cyanosis or the embarrassed respiration. Thompson believes it often, nevertheless, of distinct service, and does not like to treat a severe case without it.

*Topical Applications.*—He does not believe that topical applications to the chest wall, such as hot poultices, ice poultices, ice packs, mustard pastes, cold wet dressings, the pneumonia jacket of cotton or flannel reinforced with oil silk, have the slightest influence on the course or outcome of the disease.

Hypodermoclysis is a valuable therapeutic measure adopted in recent years. With considerable experience with this in the treatment of pneumonia, he has yet to see any ill effects follow it. It is indicated when the respiration is shallow, intermittent and irregular, with extreme cyanosis, scarcely perceptible pulse, coma and complete asthenia. Inject hypodermically into the flanks 1,000 or even 600 c.c. of hot (110 F.) normal salt solu-

tion (0.6 per cent.). This will sometimes produce a surprising response, and enable the patient to rally for an hour or two, when the procedure should be repeated. Salt solution into the rectum may also be of service.

In sthenic cases, with a full bounding pulse, and every evidence of a vigorous heart irritated into too forceful activity by a sudden toxemia, aconite may prove a most useful remedy for the first twenty-four or thirty-six hours, but not longer. The return to venesection in such cases is not necessary or wise.

*Cardiac Stimulants.*—In one case strychnine may prove the best form of cardiac stimulant; in another digitalis is better combined with nitroglycerine; in yet another strophantus, caffeine or alcohol may prove the better remedy. In any critical case, strychnine, nitroglycerine, or the tincture of digitalis, are all best administered hypodermically, for their absorption from the stomach is not only slow but unreliable during fever.

Thompson discountenances wholly the entire coal-tar series and jaborandi or pilocarpin.

At the Presbyterian Hospital, in New York City, during the past decade more than 12 per cent. of all cases of pneumonia have resulted in recovery without any medicine whatever.

#### **Notes on the Treatment of Adenoid Vegetations.**

John R. Winslow in the January-February number of the *Journal of Eye, Ear and Throat Diseases*, says:

If the adenoid is very small and is producing no symptoms it should not be removed as a prophylactic against possible trouble. If the growths are found to interfere with any of the physiological functions of the parts concerned, then our duty is to remove them else irreparable damage may result.

In infants from a few weeks old to about two years, no anesthesia; unarmed finger.

In children over 14 years of age and in adults, use cocaine anesthesia, combined with adrenalin at times, the patient in the upright position; if a child, wrap in a sheet, mouth gag, curette, examine with mirror afterwards.

General anesthesia should be reserved for patients too unmanageable or too nervous to be controlled.

A simple adenectomy, when the tonsils are not enlarged, and there are no ear complications, can be thoroughly performed during the forty seconds of nitrous oxide anesthesia, only for hospital or office use, and a rapid operator with everything ready.

Statistics show an exceptionally high mortality from chloroform anesthesia in individuals of this constitutional type.

The supported hanging head (Rose) position is the most satisfactory and safest.

Recurrence of the growths takes place, no matter who the operator or what the instruments, whether with or without general anesthesia, and despite after treatment in a more or less definite percentage of cases (10 per cent.).

**Locomotor Ataxia (N.Y.M.J. and P.M.J.)**

R.	Sodium cinnamate .....	10 parts
	Sterilized water.....	100 parts

Sig.: For subcutaneous injection in the interscapular space.

—Paul Bartholow.

Sodium cinnamate is a remedy for locomotor ataxia of recent date, and has been proved to have special value. The solution should be kept in dark-colored bottles, and be freshly prepared for each injection. There is scarcely any pain on injection. As a rule three injections are deemed sufficient. Beginning with twenty minimis the amount can slowly be raised to sixty. The almost immediate effect of the injections noticed were a decided gain in weight and strength; some of the nervous phenomena diminished in severity, and co-ordinate movements were performed with more vigor and accuracy.

**Indications for the Use of Normal Saline Solution.**

Palmer (*New York Medical Journal* and *Philadelphia Medical Journal*), states that the most frequent indication for the use of normal saline solutions is to combat the effects of hemorrhage, traumatic, operative, post-operative, postpartum, pulmonary, gastric and intestinal.

In shock, it is a most valuable remedy.

In uremia and puerperal eclampsia the frequently repeated injection of 200 c.c. will assist in stimulating the kidneys and skin to activity, and will promote the excretion of toxines from the system. In these conditions the results are most satisfactory.

In the local treatment of burns, gauze saturated with normal saline solution makes an excellent dressing.

In acute prostatitis the frequently repeated rectal irrigation, with normal saline solution with temperature 115 to 120 deg. F., using from two to four litres at a time, will be followed by satisfactory results.

In chronic gastric catarrh a large glassful of hot normal saline solution, taken a half hour before each meal, will cleanse the stomach of an excess of mucus and increase its motility.

## The Physician's Library

*The International Medical Annual.* A Year-Book of Treatment and Practitioner's Index. 1904. Twenty-second year. New York: E. B. Treat & Co.

As a means of keeping abreast of the times in medical literature the "International Medical Annual" continues to fill, as it now has done for twenty-two years, a distinct field. This volume bears particularly on the practical side of professional work, and, as in former years, there are a series of original illustrations of practical and of permanent value. In addition there has been added this year a number of stereoscopic views—a new feature, and one of distinct importance. One series of plates on small-pox is timely, and will be sure to prove acceptable as well as valuable. We hope to see some Canadian names in future issues as contributors.

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*Anatomy Applied to Medicine and Surgery.* By D. E. MUNDELL, B.A., M.D., Professor of Applied Anatomy, Faculty of Medicine, Queen's University; Ex-examiner Practice of Medicine, Ontario Medical Council; Surgeon to Kingston General Hospital, Kingston. Kingston: R. Uglow & Co. (Printed at the *British Whig*.)

We are glad that we have been favored with a copy of this book for notice in our pages. The fact that it is written by a Canadian practitioner appeals to us, because we fully believe we have men in our ranks who are splendidly qualified to take front rank in medical authorship. True, there have been many who have contributed valuable and well-known articles to great systems, but our individual works are *nil*. An examination of this book satisfies us that it will make a valuable addition to the textbooks in this department, and that it will appeal to medical students as a clear and concise exposition of applied anatomy. Whilst there are a few typographical errors, attention to which is directed by an "Errata" page, we are satisfied that another edition when it appears, will have these rectified. We hope there will be sufficient demand for this book, that the author will feel justified in enlarging thereon, and so make it a work equal to the best now in use. It is neatly gotten up, leaving nothing to be desired in this direction.

*Pain and its Indications.* By EDWARD C. HILL, M.D., Professor of Chemistry and Toxicology, Denver and Gross Medical College.

Pain, from the standpoint of the patient, is the most important of symptoms. To recognize its cause and give relief is the first duty of the physician.

Dr. Hill has written what may be considered an "encyclopedia of pain," enabling the physician to trace this symptom to its origin and then suggesting the indicated remedy or remedies.

This work has been carefully classified, so as to present the facts in the most available form for the physician's use.

It will be found a valuable work of reference and an indispensable vade mecum in the treatment of this symptom.

It abounds in valuable prescriptions, garnered from many sources.

Treatment, as a matter of fact, occupies a very important part, it being the object of the author to point out the indications through which the cause of each and every pain can be reached, so as to effect a cure when possible, as well as to indicate the remedies of most value in each individual case, to be used for the purpose of giving relief. Cloth, gilt top, \$1.00. G. P. Engelhard & Co., Publishers, Chicago.

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*Commoner Diseases of the Eye; How to Detect and How to Treat them.* By CASEY A. WOOD, C.M., M.D., D.C.L., Professor of Clinical Ophthalmology in the University of Illinois, etc., and THOMAS A. WOODRUFF, M.D., C.M., L.R.C.P., Professor of Ophthalmology in the Chicago Post-Graduate Medical School, Chicago, etc.; 250 illustrations; seven colored plates; 500 pp. 5 x 8 inches. Bound in green buckram, gold side-title and top. \$1.75 net. G. P. Engelhard & Co., Chicago.

We have examined this little volume quite carefully, and are prepared to give it our endorsement. It will be found practical, up-to-date, and valuable to the medical student and general practitioner. Whilst we do not believe it is the proper thing for general practitioners to treat to a termination all diseases of the eye—it is too valuable an organ for that—he does require a working knowledge of the subject, and oftentimes has to do the best possible under existing circumstances. This work will be found an excellent assistant, especially as it is clear and concise on the commoner diseases of the eye—a field which it only aims to cover. Dr. Casey A. Wood is well-known to Canadians, and many will, no doubt, be glad to have his opinion at their elbows.

*Progressive Medicine.* Vol. I., March, 1904. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and *Materia Medica* in the Jefferson Medical College of Philadelphia. Octavo, 337 pages, 7 illustrations. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address. Philadelphia and New York: Lea Brothers & Co., Publishers.

The adaptability which has enabled American genius to profit by the painstaking work of the Old World, to grasp its import and then improve upon it, is nowhere more strikingly exemplified than in the present series of quarterly digests.

In medical matters particularly, we have received many good things from Europe and have nearly always managed, in making them our own, to add features of characteristic ingenuity and practicality, and, thanks to the zealous effort of the distinguished editor and a most efficient corps of collaborators, we can now boast of possessing in "Progressive Medicine" a conspectus of medical progress which equals the great German "*Jahrbucher*" in scholarliness of treatment and in accuracy of the material, while it excels them in convenience of reference and in the extremely serviceable manner of presentation.

No worker in medical or allied fields, whether he be specialist or general practitioner, whether his province be pure science, or applied surgery or medicine, can fail to find this series of the greatest service. The man of note who is preparing a paper will find here the modern references with digests of the articles he requires to make his bibliography complete, and the plain, everyday doctor puzzled by an obstinate case can instantly refer to the methods of diagnosis and treatment employed to-day by the most eminent specialists of the world.

It cannot be too much emphasized that this is not a mere collection of miscellaneous abstracts and translations gathered at random but is a strictly original work in which men of international reputation have written, in monograph form, the advances that are being made in their respective departments, giving references to the original articles with careful digests, and in the light of their own experience and judgment selecting the wheat from the chaff, correlating results from different quarters of the globe, adjusting apparently contradictory observations, and everywhere indicating how and why and where progress has been made. The scope of the present volume includes extensive essays on such im-

portant and essentially progressive subjects as cerebral pressure, heart surgery, the treatment of tic douloureux, exophthalmic goitre, the transmission of diseases by insects, the theories as to the etiology of rheumatism, tetanus, paratyphoid, modern views on the nature of hay fever, etc., in which the latest work of foreign and domestic observers is fully discussed.

The change of form to that adopted by the Continental publications puts it on a par with them in point of price, since the cost of cloth binding is omitted, while the paper cover is sufficiently stout to withstand all ordinary wear and tear and makes the volume much more easy to carry and handle. In addition it permits the great advantage of binding in conformity with one's personal taste and uniformly with other books.

Considered from every point of view, that of authoritative-ness, completeness, adaptation to practical needs, agreeable style, availability for reference, convenient form, satisfactory press-work, telling illustrations, and marvellously low price, the work is one that the medical profession may well be proud and grateful to possess.

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*Obstetrics for Nurses.* By JOSEPH B. DELEE, M.D., Professor of Obstetrics, Northwestern University Medical School, Chicago; Lecturer in the Nurses' Training Schools of Mercy, Wesley, Provident, Cook County, and Chicago Lying-in Hospitals. 12mo of 460 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. Cloth, \$2.50 net.

Although this work was written, as the author says, primarily for nurses, yet from our interesting examination of it we firmly believe that medical students will find in it much of value, since the duties of a nurse often devolve upon him in the early years of his obstetric practice. There are really two subjects considered—obstetrics for nurses and the actual obstetric nursing—and Dr. DeLee has combined them so that the relations of one to the other are natural and mutually helpful, presenting this important branch of medicine in a clear and interesting form. The illustrations have not been borrowed from other works, as is too frequently the case, but have been made expressly for this book. The photographs were taken by the author from actual scenes, and are true to life in every respect. The text is

the outgrowth of eight years' experience in lecturing to the nurses of five different training schools.

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*Atlas and Epitome of Operative Gynecology.* By DR. O. SCHAFFER, of Heidleberg. Edited, with additions, by J. Clarence Webster, M.D. (Edin.), F.R.C.P.E., Professor of Obstetrics and Gynecology in Rush Medical College, in affiliation with the University of Chicago. With 42 lithographic plates in colors, many text cuts, a number in colors, and 138 pages of text. Philadelphia, New York, London: W. B. Saunders & Company. 1904. Canadian agents: J. A. Carteth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$3.00 net.

This new addition to Saunders' admirable series of Hand-Atlases is excellent. It is unfortunate that medical students graduating each year know less about gynecologic operations than about almost any other department of operative surgery. This atlas, therefore, is opportune, and the excellence of the lithographic plates and the many other illustrations render it of the greatest value in obtaining a sound and practical knowledge of operative gynecology. Indeed, the artist, the author, and the lithographer have evidently expended much patient endeavor in the preparation of the water-colors and drawings. They are based on hundreds of photographs taken from nature, and reproduce faithfully and instructively the various situations which they intend to illustrate. The text closely follows the illustrations, and we have found it fully as accurate. We consider it of great value to the up-to-date practitioner and surgeon, as well as to the specialist.

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*Preventive Medicine.* Two Prize Essays. Issued by the Maltine Company, Brooklyn.

Our readers will remember that some time ago the Maltine Company of Brooklyn, N.Y., offered prizes of \$1,000 and \$500 in cash for the best two original essays on Preventive Medicine. In all there were submitted in this competition 209 articles, the winners carrying off the prizes being W. Mayne Babcock, M.D., Lecturer on Pathology and Bacteriology, Medico-Chirurgical College, Philadelphia, and Lewis A. Somers, M.D., of the same city. The title of the first essay was, "An Essay upon the Gen-

eral Principles of Preventive Medicine;" the second, "An Essay upon the Medical Inspection of Schools: A Problem in Preventive Medicine." Both of these have been published in neat paper-covered book form, and will be supplied gratis to any physician making application for same to the Maltine Company.

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*Who's Who in History and Who's Who in Mythology.* Being two small, neat volumes, respectively devoted to 1,000 classical characters, and 1,000 mythological characters, briefly described. New York: Hinds & Noble.

Mythological and historical characters are constantly cropping up in literature, as well as in conversation. These little volumes will act as handy reference books. It is sometimes embarrassing when we run across these names, and have forgotten for the time being "Who's Who." It will be convenient to have at our elbows a handy work which will readily tell the name of every god or goddess or hero whose name is ever likely to be broached.

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*Clinical Lectures on Diseases of the Lungs and Heart.* By JAMES ALEXANDER LINDSAY, M.D., F.R.C.P. (Lond.), M.A., Professor of Medicine, Queen's College, Belfast; Physician to the Royal Victoria Hospital, Belfast; Consulting Physician to the Ulster Eye, Ear and Throat Hospital, Belfast; the Ulster Hospital for Children and Women, Belfast, and the Coleraine Cottage Hospital; Examiner in Medicine in the Royal University of Ireland; late President of the Ulster Medical Society. London: Balliere Tindall & Cox. Canadian agents: J. A. Carveth & Co., Parliament Street, Toronto.

Chiefly clinical and essentially practical, this volume embraces the substance of the author's clinical lectures to his classes at the Royal Victoria Hospital, Belfast, during the past fifteen years. It will be sure to be a successful production, and will be found of exceeding great value to both medical students and practitioners. It is clearly and concisely arranged. The examination

of this book has given us great pleasure as well as much profit, and we do not hesitate to recommend it to our readers. It is, in fact, a book of such sound common sense, and of so much good practical material, that we cannot fail but state it is a distinct acquisition to medical literature. We think no student of medicine or practitioner but will say once he has gone carefully through its pages, that it is a valuable possession. It can be obtained through J. A. Carveth & Co., Yonge Street, Toronto, and all will do well in obtaining it right away.

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*The Man Who Pleases and the Woman Who Charms.* By JOHN A. CONE. New York: Hinds and Noble, Publishers, 31-35 West 15th Street.

One of the elements of success in the practice of medicine is to know how to handle your patients well, and not a little element in this direction is deportment. A man may be ever so clever, imbued with the scientific spirit, but a crusty manner may counterbalance all his knowledge. This little volume is decidedly interesting, and will tend to refresh and educate. The price is 75c., postpaid.

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# Dominion Medical Monthly

And Ontario Medical Journal

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## THE MEDICAL EXPERT.

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Some person has remarked that all of us should be held to be dishonest until proved to be honest; but it is a well-known axiom of the English law that all accused persons are innocent until adjudged guilty. The worst criminal can always get some lawyer to defend him. That is the business of lawyers. The system, however, which arrays medical men in opposite camps, some fighting for the crown or the people, whilst others are equally solicitous for the defendant is bad and vicious. All medical men should be brought into court at the instance of the judge, and adequately paid for their services by the State, a system which would do away with the sneers and gibes at the "doctors differ." Time and again medical expert testimony has come in for some very severe criticism and hard knocks, through the fact that the medical expert is there to testify for the side which calls

him and which pays him. All this redounds to the disadvantage of the entire profession and many an individual member thereof feels chagrined over it. In many instances this may come about through the medical expert being not properly qualified as such; and it might be well for medical men to refuse to go into court, when they can refuse, when they do not feel qualified to give evidence upon the points at issue. No living medical man is qualified to give expert evidence in every case which comes before the court, and he should realize this. The surgeon is not an expert in insanity; nor is the medical man an expert in surgery. No man who is not a specialist in diseases of the eye could possibly either by experience or knowledge qualify to give expert evidence in a case of this description. Then why should he do it? Is it to bring ridicule upon himself, or sneers at his confreres? It is said that there are some medical experts who have never been known to refuse to give evidence when called upon. That they have as much knowledge of fractures from experience as they have of gall stones and other stones; that they know all about insanity and all there is worth knowing about poisons. Is a man who has never seen a case of strychnine poisoning qualified to give expert testimony in regard thereto? We trow not. He may rest assured that this will come out in court to his infinite disgust, and he will feel cheap in the face of all his auditors. Such medical expert testimony as this is valueless, ridiculous, nonsensical. Medicine is too broad a subject for any man to be an expert in everything therein; nor do years in general practice qualify therefor. If we saw a little more in the way of conscientious refusal to go into court, it would enhance the individual in the eyes of his confreres, and the gain would be with the profession of medicine. A few instances will lend emphasis thereto. One surgeon once testified that the temporal artery ran into the skull and then ran out again. The writer of a well-known book on toxicology once attended court to give expert evidence in a case of strychnine poisoning and had to admit that he had never seen a case of poisoning by strychnine. Another after an extensive family practice of forty years was chief expert in a case against a large city for damages for a Pott's fracture and had to finally back down by acknowledging that this was the first case he had ever treated of that description. Such things only serve to discredit medical expert evidence in the eyes of the jury. They do not take into consideration the fact that the expert may have a good technical knowledge of the subject. They require more; they want actual experience. No one should go into court on a given case unless he has actual experi-

ence thereon, and cannot be tripped up by any common, ordinary cross-examiner. Certainly all when they are required to go into court should do so well bolstered up with all knowledge bearing on the subject. The most trifling case should demand just as broad a knowledge as any of greater moment.

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### THE SOCIAL PROBLEM IN TORONTO.

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A short time ago a well-known clergyman, a doctor and lawyer, met in the latter's office, and the conversation turned on the extent of prostitution in Toronto. To the doctor who had some practice amongst this class of the community, it was rather a revelation to learn from the other two professional gentlemen that the city was permeated with these houses. That in short you did not know who your next door neighbor might be, and that the system adopted by the authorities here had been effective in scattering these places all over the city on respectable streets, and amongst decent and upright people. It was quite apparent to the medical man that neither the clergyman nor the lawyer considered the system a success, but that on the contrary, it provoked greater latitude and resulted in more crime, and in consequence more disease. Just whether it would not be more wise to confine these people to one quarter, is an alternative demanding, we think, at the hands of our moral authorities, most serious and careful consideration. Laymen whether engaged in enforcing law and order are, we think, not sufficiently possessed of the murderous effects on the human offspring as syphilis, and have scarcely any knowledge of the destructive influences upon the health of women as regards both her health and procreative functions. This is alone known to physicians and the unhappy and unfortunate mortals themselves. In curtailing the spread of disease, we are not so sure that the regulation of prostitution by law has been provocative of good results in those countries where that procedure has been adopted. One thing is sure that alcohol plays an important part in the dissemination of these venereal diseases, and it is markedly incumbent on the medical man that strict warning should be given all, that the innocent do not suffer thereby. An eminent and distinguished sociologist has said, "man is the most precious capital of states and empires." Granting such, can there be any more important problem in

sociology, than, as Dr. Morrow puts it in his admirable work on "Social Diseases and Marriage," "the relations with marriage of diseases which especially affect those physiological functions through which life itself is perpetuated."

As an evil prostitution is said to be growing, and is certainly spreading in Toronto; and it will be wise for the morality authorities to consider whether it would not be better to confine these unfortunate mortals to a given quarter.

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#### THE PUBLICATION OF ORIGINAL ARTICLES.

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We very recently had the pleasure of turning down an original article, which has since appeared in some twenty medical journals. We do not hold that this wholesale distribution of an author's efforts adds either to the journal's prestige which publishes same or to that of the author himself, but rather that it detracts very much from each. Whilst we have no objection to an original article being given to two journals for publication, a weekly, a special or a local one, we do object to an author, when requested for his paper for exclusive publication, giving same, and then sending it to others without saying a word about it to either. In this way often articles are noticed in four or five journals, and the editors are chagrined at its repeated appearance. The *Montreal Medical Journal*, in its March issue, has something to say on the same subject. Writing on the coming meeting of the Canadian Medical Association at Vancouver next August, the editor states: "Something should be done to prevent the unseemly scramble for papers by editors of journals, intent only upon filling their pages somehow during the lean summer months." We quite agree with the *Montreal Medical Journal*, but the "lean summer months" are past when these papers are sought for. Gentlemen who read papers at the annual meetings of our medical societies should allow themselves to be governed by those clauses in the constitution which provide for the publication of papers, and allow the publication committees to apportion the papers amongst the different medical journals. It should be the strict rule that a copy, or rather the original paper itself, should be left with the secretary; and in the absence of any designation by the author, all such papers should be dealt with by the Publication Committee. And there would be probably

no objection to some of these papers appearing in at least two publications. Authors, no doubt, are often pestered for copies of their papers, and are reluctant to refuse. It is a question to be decided, as there seem to be different opinions on the subject, whether the author or the society before which he reads his paper, has the right to direct its publication.

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### ASYLUM PROMOTIONS?

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Without making reference to any particular appointment in the asylum service of this Province, we are in perfect accord with sentiments of a member of the Opposition when he states that the Government ought to make promotion in the asylum service a reward for faithful services. Nor do we see the need of passing by a faithful and competent assistant when a superintendent is required, as is too often done. The medical service in our various asylums should not be a means of awarding doctors who have done a little stumping and a little caueussing for party; and it is to the credit of no government to use the offices as bait for party angling. Our insane asylums should be hospitals, medical appointments to which should be made irrespective of party, and preferment given to those with experience, who have devoted their lives as internes since graduation. The doctor with political ambitions given the quietus, whether in general practice or in a specialty, should not be foisted upon the wards of the government.

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### News Items

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DR. LUCY, of Drayton, is moving to Chicago.

DR. JAMES BELL, Montreal, has gone to England.

WILLIAM RICHARDSON, M.D., of Burlington, is dead.

DR. GEORGE BROWN, Montreal, will return from Europe in May.

HAMILTON talks of erecting a sanatorium on its mountain's brow.

TORONTO University will erect a dispensary building for consumptives.

TORONTO has not been as free of scarlet fever for years as it was in March.

THE Dominion House of Commons decrees that the cigarette shall stay with us.

DR. BLACKADER has returned to Montreal very much improved in health.

THE vaccinations in the schools of Montreal numbered 20,736 this season.

A BRANCH of the National Sanitarium Association has been formed at Hamilton.

TUBERCULOSIS caused 30 deaths in Toronto during March; in 1903 the number was 38.

PNEUMONIA was the cause of 56 deaths in Toronto during January; February, 36; March, 42.

ACCORDING to an Ontario judge the law cannot force any one to undergo an X-ray examination.

DR. GRAHAM CHAMBERS, Toronto, will sail for England in May. Mrs. Chambers accompanies him.

DR. CLAUDE W. FREEMAN has been appointed Superintendent of the Hamilton City Hospital.

DR. WILSON, of St. Thomas, has been appointed to the seat in the Senate rendered vacant by the death of Dr. Landerkin.

DR. ARNOLD McCORMICK and wife, formerly of Wheatley, who have been in England the past six months, have returned.

THE death is announced of Dr. Carter, a medical practitioner at Moosomin, N.W.T., for the past twenty-two years. He was district coroner.

"ORGANIZED LABOR" in Victoria, B.C., purposes furnishing a room in the new Strathcona wing of the Royal Jubilee Hospital of that city.

WE are pleased to be able to announce that Dr. J. T. Fotheringham, Toronto, is recovering from a very severe attack of blood poisoning.

By the will of the late Mrs. Turnbull, of Quebec, \$500,000 has been bequeathed to the Governors of the Jeffrey Hale Hospital.

THE Federal Government has made an appropriation of \$3,000 towards improvements to be made at the Marine Hospital, Victoria, B.C.

TORONTO reported 88 cases of diphtheria in March and 122 in February; scarlet fever, 30 in March and 40 in February; typhoid fever 2 in March and 5 in February.

THE Montreal General Hospital passed through its wards in 1903, 3,066 patients, against 2,878 in 1902, or an increase of 188. The outdoor patients numbered in 1903, 35,984, against 31,993 in the previous year, an increase of 3,991.

THE Ontario Medical Association has received a very kind reply in response to its invitation to Sir Frederick Borden, to attend the June meeting. If his parliamentary duties permit, he promises to come to Toronto as the guest of the Association at that time.

MR. W. M. GRANT, for many years Toronto representative of Parke, Davis & Co., has been promoted to the position of business manager of their Canadian branch at Walkerville. We congratulate him on promotion to a position he is so eminently qualified to fill.

MR. ARCH. MCFADYEN, well and favorably known to the medical profession throughout Canada as travelling representative of J. A. Carveth & Co., Toronto, has entered the employ of Chandler & Massey Limited, Toronto, as manager of their book department.

THE Provincial Lunatic Asylum of New Brunswick will change its name by special act of the legislature to the Provincial Hospital for the Cure of Nervous Diseases. The bill will also authorize the commissioners to employ two disinterested and competent medical men, who with the superintendent, shall examine all patients, and see who ought to be in the asylum and who should be sent elsewhere.

THE Inspector of Asylums for Ontario, R. Christie, laid the report of lunatic and idiot asylums on the Legislature table recently. It shows that last year there were 889 admissions to asylums, or a decrease of 127 compared with 1902. The total number of inmates at the end of the year was 5,458, as compared

with 5,372 the previous year, while the total number of insane officially known to the department, including those in jails and private asylums, was 6,230, or a total increase for the year of 183. The entire expenditure for maintenance was \$715,918.

DR. A. H. ANDERSON, of Rainy River, has received the appointment of surgeon in the Japanese army, and left for the far East on 2nd April. Dr. Anderson is a former St. Thomas boy. He was once an officer in the 25th regiment and served in the South African war. He was practising at Rainy River with Dr. McCrimmon. He is a brother of Drs. H. B. and Duncan Anderson, Toronto.

DR. MOORE, Secretary of the Canadian Association for the Prevention of Tuberculosis, says the old Contagious Hospital on Rideau Street, Ottawa, will be converted into a sanitarium for consumptives. Negotiations are now under way with the Protestant Hospital directors to that end, and a wealthy citizen of Ottawa has promised the money to remodel the building to make it suitable for the purpose. It is high and dry in location and said to be quite suitable.

A DELEGATION of Canadian physicians composed of Dr. J. A. Hutchison and Dr. Armstrong, of Montreal; Dr. Murray McLaren, of St. John, N.B., and Dr. W. G. Anglin, of Kingston, Ont., have started on a trip through the different hospital centres of the Old Country. They sailed from Boston for Naples, on April 9th, and it is their intention to work their way through Italy, stopping at all the principal hospitals, and finally making their way to Vienna. The medical men will visit the home and hospital of the world-famous surgeon, Dr. Lorenz.

DR. HODGETTS, Secretary of the Provincial Board of Health, states that in future medical men must report all cases of infectious or contagious diseases. He has looked up the records and finds that in 1902 there were returned to the department 1,542 cases of typhoid fever, while the hospital statistics show 2,067, with 242 deaths. In 1903 a return from the 700 divisions showed 1,012 cases, while in the hospitals there were 1,918, with 208 deaths. The purpose of the Medical Health Act, he says, is being destroyed and the healthy condition of the province very much endangered. During the past few months several outbreaks of typhoid have been covered up by medical men failing to report. Prosecutions may be resorted to in order to wake doctors up and protect the public.

**ISOLATION HOSPITAL, VICTORIA, B.C.**—Among the matters discussed at the last meeting of the Board of Health was the question of admitting provincial patients to the Isolation Hospital. It was decided that a guarantee of payment will have to be made by the Government before these patients are admitted in the future.

**ANATOMY AT QUEEN'S.**—Queen's medical faculty has practically decided to place the subject of anatomy on the same basis as those of biology and bacteriology by appointing a demonstrator who will give his whole time to the subject, and not enter into general practice. This matter was brought before the Faculty by the Dean, Dr. J. C. Connell. A notice has been posted at the medical college regarding the Faculty's intention, and applications are invited for the position from final year students, one of whom will be chosen and expected to continue the study of anatomy as a specialty, particularly along comparative lines. Such demonstrator would have the standing of lecturer, and in time would be given the professional chair.

**THE MILITARY MEDICAL BRANCH.**—The medical branch of the Militia Department has now on order a large supply of material and equipment that will add materially to the efficiency of this service, and when certain reforms now in contemplation are carried into effect will make it one of the best arms of our citizen army. The purchases include eighteen ambulance wagons of a new type, designed by Lieut.-Colonel Fiset, Director-General of the Canadian Army Medical Service. Each wagon will be a hospital in itself, with room in it for four patients lying down, or thirteen sitting. There will be, beside, nine water carts, that is, one for each bearer company; twelve sets of medical panniers, twelve sets of surgical panniers, eighteen sets of canteen panniers, fifty surgical haversacks, and fifty monkey boxes. The wagons are being made by the Ottawa Car Company, whilst the other material is being brought from the Old Country.

**A SANATORIUM FOR CALGARY.**—Calgary, N.W.T., is to have a sanatorium for the treatment of pulmonary tuberculosis. Plans for the erection of such a building have been completed for Dr. Ernest Wills, of that city. Dr. Wills has visited a large number of similar institutions in England and the United States. From all these he has adopted the best points, and as a result the sanatorium to be erected will be one of the most complete in Canada. The first building to be erected according to the plans will be two storeys high with a stone foundation. It will be 100 feet

long, and at the centre 48 feet in depth. An eight foot verandah will take in three sides of the building. The building has a splendid south exposure on sloping ground. On the ground floor there will be recreation and reading rooms, a consultation room, dining-room, kitchen, pantry, storerooms and nine bedrooms. On the second floor there will be twelve bed-rooms, six of which are sun rooms, being almost entirely composed of glass.

**AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS.**—As already announced, the above Congress will be held in St. Louis on 3rd, 4th and 5th of October, 1904. Dr. E. J. Barrick, of Toronto, is the president, and is putting forth great efforts to make the gathering a great success. So far, the indications are of a most encouraging character. From all sources come promises of assistance in the way of papers and the presence of well known authorities in medical science. A short time ago Mr. Clark Bell, LL.D., of New York, visited Toronto, and was the guest of Dr. Barrick. While in Toronto a number had the opportunity to meet Mr. Bell, who is editor of the *Medico-Legal Journal*, *Taylor's Medical Jurisprudence*, and a member of the New York bar. He is an enthusiast on the question of tuberculosis and the efforts that should be made for its suppression. The Federal Government of Canada has decided to send delegates to the Congress. Canada is taking an important part in this movement as will be seen by the following list of officers: Honorary Vice-Presidents—Dr. T. G. Roddick, M.P., Montreal, Que.; Sir William Hingston, M.D., Montreal, Que.; Hon. Senator George A. Drummond; James Loudon, President of the University of Toronto; Hon. William Mortimer Clark, Lieut.-Governor, Ontario; Hon. J. R. Stratton, Dr. John Ferguson and Prof. Adam Wright, Toronto. Vice-Presidents at large—Dr. W. P. Caven, Toronto, Ont.; Dr. Daniel Clark, Toronto, Ont.; Rev. C. S. Eby, D.D., Bracebridge, Ont.; Dr. R. W. Powell, Ottawa, Ont.; Dr. W. H. Moorehouse, London, Ont.

**NO ADULTERATION IN CANADIAN LIQUORS.**—The Department of Inland Revenue has issued a bulletin on distilled liquor. The samples analyzed consisted of: "Rye whiskey, 91, white, 30; Scotch, 24; Irish, 2; gin, 27; rum, 12; brandy, 30; total, 216." Mr. McGill, who made the analysis states: "No deleterious substances have been found in any of these samples. In accordance with special instructions, I have made examination for alkaloids in all whiskey samples, having less than seventy-five per cent. proof strength. A negative result was obtained in every case. The principal adulterant is water. In order to

enable me to say whether or not a sample may be styled adulterated from dilution with water, it is necessary to recognize some standard strength for alcohol. The British Sale of Food Amendment Act of 1879, fixed the minimum limit strength for gin at sixty-five per cent., and that for brandy, rum and whiskey at seventy-five per cent. of proof spirit. Although these limits are not legally recognized in Canada, I have used them (in the absence of any other standard), for purposes of comparison. The spirits most tampered with are whiskey (rye and malt), and gin, whilst gin shows a noteworthy falling off in strength." In conclusion, he says: "I may add that the furfurol test and the production of a distinct turbidity (opalescence) on the addition of water to the distillate are the chief means we possess for discriminating between a liquor which has been produced by direct distillation from the "mash" and one which has been manufactured by reducing rectified spirit with water to the desired strength and further addition of flavoring or coloring matter. Scotch and Irish whiskies, gin, rum and brandy are liquors of the first type (sometimes spoken of as pot-still spirits). Rye whiskey and white whiskey (malt whiskey) are usually manufactured from rectified spirit."

## Special Selection

### BRIEF OBSERVATIONS ON SOME CONDITIONS IN WOMEN THAT ARE OF MUCH CONCERN TO THE PRACTITIONER.

By J. RIDGLY SIMMS, A.M., M.D., RACINE, WISCONSIN.

The conditions of which I wish to speak are dysmenorrhea, and the state following miscarriage or abortion, in which there are retained portions of the placenta and membranes that require removal or expulsion.

For lack of space, I shall devote myself, in the present paper, chiefly to dysmenorrhea, and will dismiss the condition following abortion with a few remarks, which may as well precede the other part of my article. I reserve for a future communication the detailed discussion of this important and interesting clinical condition.

The effects of retained placental or fetal tissue in a partially successful miscarriage or abortion consist in hemorrhages, purulent discharge, enlargement of the uterus, subinvolution, metritis, endometritis and sepsis. The indications in these cases are, therefore, the thorough emptying of the uterus and the rendering of the womb-cavity aseptic.

In ordinary cases this must be done by surgical interference, including curetting and the removal of all decomposing and diseased tissue, followed by the application of antiseptics to the endometrium. There is a class of cases, however, in which for one reason or another curettage is refused by the patient, and in which it is incumbent upon the physician to give what relief he can by medical means. In such cases I have prescribed Ergoapiol (Smith), a combination of the active principles of ergot (ergotamine) parsley (apiol) and certain other emmenagogues and uterine tonics. In one case of this kind which came under my observation some months ago, I used Ergoapiol (Smith) with such marked success, that I learned since then to rely upon this preparation in removing the retained fragments from the uterus, emptying the organ and reducing it to its normal size and functions. The remedy in question has proved so trustworthy in

my hands in these cases, that when it disappoints, which it rarely does, I look about to ascertain wherein I myself have erred.

A discussion of the causes of dysmenorrhea would lead us too far in the present brief clinical paper, and it will suffice if I assume that the reader is acquainted sufficiently with this part of the subject to follow me in the remainder of the article. The clinical diagnosis of dysmenorrhea is in itself easy enough, while the diagnosis of the cause is not always so simple. In the cases presented here I paid especial attention to the causation of the menstrual pain, as I believe that in this manner I was better able to outline the indications for treatment. It goes without saying that dysmenorrhea from mechanical obstruction is not amenable to medical treatment. Fortunately, however, it has been in my experience at least, not frequent, as dysmenorrhea depending upon congestion. The specially disagreeable and intractable form of dysmenorrhea which is accompanied by a fetid discharge as a result of the decomposition of the retained menstrual blood, also comes under discussion here, as the use of douches with antiseptics and deodorants cannot be hoped to affect it permanently, while the employment of more radical medicinal means does bring about the desired effect in this condition.

In congestive dysmenorrhea, and in that form which is accompanied by fetid discharge, the indications are to diminish congestion, by promoting the contractions of the uterus and relieving it of the accumulated blood, to stimulate glandular activity in the mucosa, to restore the tone of the uterus and the nutrition of its tissues to normal, and to relieve spasm and pain.

The following cases illustrate the effects which I obtained with the use of Ergoapiol (Smith) in the treatment of dysmenorrhea:

Some months ago I was consulted by a young woman who had suffered from scanty, fetid menstruation, accompanied by a great deal of pain, since the birth of her first child seven years previously. Her labor had been followed by a tear of the perineum which had been left unrepaired, and also a laceration of the cervix uteri. This patient consulted a specialist, but his treatment did not give her relief. Examination revealed the presence of the uterine and perineal lacerations already mentioned, and disclosed a chronic endometritis that had given rise to a fetid discharge and to pain during each menstrual period. I repaired the tears, curetted the uterus, and hoped in this manner to obtain permanent relief of the patient's symptoms. After she had

recovered from the operations, she declared that she was feeling better than she had been for years. But very soon the fetid discharge and the pain returned at each menstrual period, and evidently something else had to be done if I wanted to save my reputation. I then tried local applications, alteratives, uterine tonics, etc., all without avail, until finally Ergoapiol (Smith) was given. The result was immediate relief and a gradual and permanent improvement in the menstrual flow until it was free from pain and devoid of any disagreeable odor.

This patient was evidently suffering from congestive dysmenorrhea which was intensified by the presence of lacerations of the cervix and the perineum which had existed since parturition. The result attained illustrates very well how Ergoapiol (Smith) acted upon the uterus, restoring its tissues to normal condition and re-establishing the menstrual function upon its normal basis.

Another type of dysmenorrhea, that which I term "nervous," but which the authorities term "neuralgic," is illustrated by the following case which recently came under my care:

The patient was a young woman who had been married two years, but had not borne any children. She stated that she had pain during the menstrual period from the first onset of menses, and at the time of examination she also complained of a fetid discharge. The menstrual flow was scanty and rarely of blood red color. Just before and after the period, she had backache and headache, her complexion was unhealthy, not bright and clear as that of her sister, and she appeared older than she really was. She always dreaded the onset of the menses which recurred with a regularity that is not always present in these cases. She was easily excited, and received impressions vividly and indelibly. Her digestion was poor, and she was often sleepless, irritable, and peevish.

Vaginal examination revealed a slightly thickened os and slight endocervicitis with erosions of the cervix. Cod-liver oil, malt extract, hypophosphites, and aromatics, in combination, 25 per cent. of each, were given freely during the intervals between the menstrual periods, and for three days before the expected menstruation Ergoapiol (Smith) was given in capsules, one being given three times daily until the discharge ceased. At the fourth period after the beginning of the treatment she was relieved of all her symptoms, and was free from pain and fetor during menstruation. Locally, tincture of iodine and occasionally tampons of ichthylol and glycerine were applied. The cure was permanent and in every way satisfactory.

## CHRONIC NASAL CATARRH—A SIMPLE AND EFFECTIVE TREATMENT.

BY G. A. GILBERT, M.D., DANBURY, CONN.

We feel inclined to report this case here, not only because of the marked and speedy results obtained from the simple plan of treatment adopted after the usual measures had been tried and proven ineffective, but because of the frequency with which the particular group of symptoms complained of by this patient confronts the general practitioner in his every-day work.

Lena D., a young miss of 18, had been a sufferer from chronic rhinitis or pharyngo-nasal catarrh for more than ten years, being subject to periodical attacks of coryza and tonsillitis, especially during the spring, fall and winter months. The mucous membrane of throat and nose became habitually flabby, congested and swollen.

At the age of 12, the characteristic thick, indistinct speech and stertorous breathing of the catarrhal subject became manifest, while at the same time, the plugging of the pharyngeal opening of the eustachian tube by the thickened mucous secretions gave rise to slight deafness.

The treatment throughout had consisted of insufflations of the usual antiseptic powders, ante and post-nasal douches, with the modern germicidal solutions, while various astringent or disinfectant gargles and sprays were used for the tonsillitis, but these gave only temporary relief. It was apparent that only the membranous surface was thus freed of its obnoxious discharges and not the deeper sub-mucous tissues and gland sacs which harbored (unwillingly) the germs that gave birth to these discharges, and it became self-evident that some more active method of treatment must be adopted.

In dental surgery it is well known that an antiseptic solution having an alkaline base is the most effective for cleansing the mouth of putrefactive material arising from fermented food (starch particles in the substances adhering to the teeth), as well as that caused by the bacteria of dental caries, *leptothrix buccalis*, etc. This fact is explained on the chemical ground that the alkaline base readily combines with these various weak acids with which it comes in contact, thus breaking up the solution and liberating the oxygen or oxidising agent upon which its disin-

fectant properties depend. In a word, such an alkaline agent dissolves the mucous secretions and weak acids which form in the mouth.

Were the foregoing all that is required of an antiseptic, nothing further would need to be said, but it is essential that the bacteria hidden more deeply within the walls of the gland sacs should also be removed. Recognizing the force of the suggestion recently made by scientific investigation, *i.e.*, that a true alkaline germicide dissolves the bacterial envelope instead of coagulating it as do the acids, and that if the specific gravity is favorable to low exosmotic action it will be absorbed into the surrounding tissues and gland sacs where the germs are hidden, it at once occurred to us that an alkaline agent of this character was just what was needed.

Feeling convinced that an alkaline antiseptic was strongly indicated in this case, the best of its kind, Glyco-Thymoline, being selected, was applied thoroughly once every day by myself and three or four times daily by the patient. A 25 per cent. watery solution (warm) of Glyco-Thymoline was made by me, and applied in a fine spray to the post-nasal chamber by means of a hand atomizer. The nozzle was turned up at the end, so that, when introduced well back into the pharynx, the spray was thrown upward direct into the post nares.

The patient herself soon learned to operate the post-nasal douche satisfactorily, and was instructed to spray the parts in this manner twice daily, besides applying the solution (in the same strength) with the K. and O. douche. At the same time an ounce of a 50 per cent. solution of Glyco-Thymoline was gargled, and used as a mouth wash three times daily for the purpose of hardening the flabby, congested tonsils.

The outcome of this simple plan of treatment soon made plain the fact that a germicidal agent was being employed in this case which possessed the alkaline and solvent properties already mentioned as being essential to success. The patient's general system had first been thoroughly purged of retained waste by way of kidneys and bowels, after which the local treatment was adopted as above described. This latter procedure was not only effective, but the antiseptic proved very agreeable to the patient who for the first time in several years experienced the sensation of possessing a clean, sweet mouth.

The hypertrophied membrane itself grew almost normal in appearance, distinctness of speech and hearing was gradually restored, the breathing became natural, and at the end of three months we had accomplished a speedy and perfect cure.

**SURGICAL HINTS.**

When an extremity has to be rather firmly bandaged, it is a good plan to leave out the very tips of the fingers and toes so that they may be frequently examined in order to see that the constriction is not too great.

Never forget the fact that gauze will drain serum or very fluid discharges, but not pus. Hence the filling up of an abscess cavity with gauze is the surest possible way of blocking in the secretion and favoring sepsis.

It has been cleverly stated that "to say that a man with appendicitis has been cured by medical means is in many cases equivalent to saying that a man with stone in his bladder has recovered from calculus after the cure of a cystitis by rest in bed."

In blows upon the perineum it is well to remember that infiltration of urine may occur even when there have been no recognizable symptoms of laceration of the urethra, and that it should be watched for. Hematomata in this region must be kept under careful observation, and should be opened and disinfected if there is the slightest indication of sepsis.

In wounds of the liver packing with gauze is usually insufficient to stop hemorrhage, because the packing pushes the liver out of place so that no pressure can be maintained. If the wound is a small one it should be sutured or cauterized with the actual cautery. If it is large the liver should be sewn to the abdominal wall and the wound then packed with gauze.

In very severe dyspnea general anesthesia is usually contraindicated, for the reason that it abolishes the activity of the voluntary muscles of respiration, and hence may cause suffocation. In these cases the carbonic acid poisoning is often sufficient to lessen sensibility to a great extent, so that rapid operations can be done with very little pain. Otherwise local anesthesia should be employed.

Furuncles occurring on the back of the neck are in many instances the result of an inflammation around the hair follicles, or perifolliculitis. Early extraction of the hair and application of cotton and collodion are often sufficient to prevent the development of a large boil.—*Inter. Jour. Surgery.*

## Obituaries

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### A. G. BELLEAU, M.D.

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Dr. A. G. Belleau, district coroner of Quebec, who has been ill for some time past, died recently, aged 63 years. Dr. Belleau was a nephew of the late Sir Narcisse Belleau, Lieut.-Governor of the Province of Quebec.

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### JOHN CARROLL, M.D.

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Dr. John Carroll died in St. Catharines on Friday, March 25th, in his 57th year. During his earlier years he practised his profession in North Toronto, and amassed a comfortable fortune. Failing in health, he settled in St. Catharines, where he invested large sums of money in real estate, but abandoned the practice of his profession. He was a man of rare attainments and a botanist of considerable ability. He was a great helper of the poor, and educated several people to start them in life. He never married, and leaves one sister, Mrs. William H. McClive, of St. Catharines.

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### WILLIAM B. BURLAND, M.D.

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The news of the death from pneumonia of Dr. William B. Burland, the well-known and highly-esteemed physician, which took place at his residence, 288 Prince Arthur Street, Montreal, recently, will cause a great shock in many families where his kindly face and sympathetic nature had made him a general favorite. Dr. Burland was born at St. Johns, Que., on March 5th, 1844. His father was for many years collector of customs at that place. After graduating from the medical faculty of McGill University in 1872, Dr. Burland began practice in that city, winning an enviable reputation as a general family physician.

Dr. Burland took great interest in military matters, and was for many years connected with the militia, having served as captain of No. 7 company of the 1st Prince of Wales Regiment, and later as surgeon of the Royal Scots, under Lieut.-Col. Crawford's command. He was with his company at Sarnia, when Canada was obliged to protect the United States border from raids like the St. Albans affair, and served in 1866 in the Hemmingford and Huntingdon district when the Fenians threatened it from Malone. His company was selected on a night alarm, which none of them ever forgot, to march several miles toward the border and throw a screen of skirmishers across a road by which it had been learned the Fenians intended to come in. The lightning was their only consolation, for between flashes they could see where they were going. Some of the men never got over the exhaustion of that five hours' work. In 1870 Captain Burland was again with his regiment. No finer looking officer can be imagined than Captain Burland was then, and his company to a man would have followed him to the death. He was not only their commander, he was their warm friend. Captain Burland obtained the Fenian raid medal for his services in 1866-70.

Dr. Burland married Flora Stewart, eldest daughter of the late James Stewart Watt, in his lifetime an officer of the Hudson's Bay Company. Mrs. Burland survives, with two sons and a daughter.

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#### ALEXANDER BROADFOOT, M.D.

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Word was received recently of the death of Dr. Broadfoot, son of the late Alex. Broadfoot, of Tuckersmith. Dr. Broadfoot died at Mondovi, Buffalo county, Wisconsin, on February 14th last. He was a native of Tuckersmith, and will be remembered by many of our readers. The *Mondovi Herald* of February 26th contains an excellent likeness of the deceased and makes the following reference to him. It says: Alexander Broadfoot was born in Huron county, Province of Ontario, Canada, November 9th, 1854. His early years were spent in the Clinton Grammar School one year, the Collegiate Institute at St. Catharines two years, the Science Department of the Toronto University two years, and in 1880 he entered the Toronto School of Medicine, from which institution he graduated in 1884.

The same year he began the practice of medicine in Enterprise, Kansas, where he remained two years, going from there to Minnesota, where he spent a short time, and from there went to Independence, Wisconsin, in 1887. He remained in Independence six years, during which time he had a large practice. In the fall of 1893 he came to Mondovi, and in April, 1894, entered into partnership with Dr. Hobard. In December, 1897, he moved to Gilmanton, where he remained till July, 1903, when he moved back to Mondovi. Later he went to Arizona hoping to regain his health, but returned the following April. From this time his health gradually declined till February 14th, 1904, when he peacefully passed to the great beyond. His remains were interred in the Gilmanton cemetery, February 16, under the auspices of the M. W. A. Dr. Broadfoot was a man of kindness of heart, and a physician of skill and ability. His experience was varied and his success a just cause of pride. He deserved the confidence that he enjoyed in the community, and is mourned by many a one to whom he ministered and many another who shared his friendship. A wife and seven children—three sons and four daughters—survive him.

**Prize Competition, see Pages 286 and xxxiv.**

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## Original Articles

### THE GENERAL MANAGEMENT OF DIABETES.\*

BY FREDERICK C. SHATTUCK, M.D., BOSTON,  
Jackson Professor Clinical Medicine, Harvard Medical School.

(Published concurrently with *Boston Medical and Surgical Journal*, by kind permission of Author.)

Although pathological knowledge affords the best basis of therapy, it is not always the sole basis. We cured malaria long before we knew its cause. Syphilis was controlled long before bacteriology was born, and all that we know of the cause of syphilis to-day is that it must be dependent upon some form of living organism having the power of indefinite reproduction.

When we use the term diabetes mellitus, let us clearly grasp the fact that we speak probably of a symptom rather than a disease; that the presence of sugar in the urine means a greater or less impairment, temporary or permanent, of the power of the organism to consume sugar; that while our knowledge of the starting-point of such impairment is very imperfect, we have good reason for believing it may be as widely separated as Langerhans' islands in the pancreas, the liver, or several portions of the central nervous system; that during life, at least, we can rarely determine the point of origin in a given case.

Useful as the term glycosuria may be for clinical purposes

\*Read before the Medical Society of the State of New York at its Annual Meeting, Albany, Jan. 26th, 1904. Symposium on Diabetes.

as denoting the milder grades of the condition, in these brief remarks I shall, for simplicity's sake, include all grades of the failure to burn sugar under the term diabetes. Although we treat a condition and a patient, not a disease and a patient, treatment may be of much value, resulting in prolongation of life and promotion of comfort, sometimes in absolute cure. The means to the end are diet and mode of life, the *role* of drugs being, as I am sure my friend Dr. Thomson will agree, a subordinate one.

Prevention, being the highest form of medicine, comes justly first. What can we do to prevent diabetes? Very little. Human life in civilized regions unavoidably tends to become more complex, the struggle for existence fiercer, competition of all kinds, but especially among brain workers, more keen; and we must recognize nerve overstrain as one of the predisposing causes of diabetes. Even if it were practicable and wise to make periodical tests of the sugar-burning capacity of all our adult patients in active life, how many would heed the danger signal of sugar in the urine after the ingestion of a hundred grams of sugar fasting? Some even of the godly say, "Tush! there shall no harm happen unto me," showing an attitude of mind possibly more conducive to happiness and comfort in life than that of Martha, "careful in many things."

I have in mind a man approaching middle age whose great-grandmother, grandmother and mother all died of diabetes, and whose own urine has been saccharine. With such an inheritance it is fairly in place to examine the sugar combustion power of such members of the family as we can, and to enjoin a careful life as to diet and strain. Until we know far more than at present, I do not see much more we can do in either special or general prophylaxis.

Time does not permit, even if the occasion demanded, much detail; and I propose, therefore, to deal mainly with the principles which, as it seems to me, should guide us in the management of our diabetic patients. A diabetic who consults us and has not been treated should, I think, be told to collect his twenty-four hour urine for, say, three successive days, without change in either diet or mode of life, the amount of urine and sugar being important factors in the estimation of the gravity of the case. If, on the other hand, the patient is under rational treatment, which has reduced or done away with his sugar it is rarely desirable to let down the bars, as experience shows that sugar production is in many cases more easily controlled the first than the subsequent attempts. In general, with the exception of cases

which are evidently very mild or severe in type it seems to me wiser to enforce an absolute or nearly absolute diet at once—just as it is more humane to complete the shortening of a dog's tail at one rather than in successive operations. The very mild case probably does not require great restrictions. If acetone and diacetic acid are present, a radical and rapid change in diet is dangerous. The striking improvement in strength, weight, and general symptoms which we so often see rewards the patient for his self-denial, and thus encourages him to persevere.

So wide is the variation between the different cases of diabetes, and so emphatically do we treat the patient, the more we individualize our patients, applying general principles to special cases, the better results shall we have. The diet list should be adapted to each case. I do not like the printed lists disinterestedly furnished us by some of the manufacturers of food products. They encourage laziness and routine—those two cardinal vices. Moreover, quantity is only next in importance to quality in the food of a diabetic. An approximate adjustment of the amount of food to the requirements of the special case must be aimed at. The body weight should be noted at stated intervals, weekly during the earlier part of treatment, at longer intervals later and in the more favorable cases. I doubt the wisdom or necessity in most cases of such accuracy as some of the modern German writers seem to enjoin; and yet, although it may not be essential for the patient to provide himself with scales and weigh out his portions, nor to dine in scales like Dr. Sanctorius of old, he should be given a rough idea of the size of a given weight of bread, meat, and fat. An increase in the amount of fatty food may be of importance nearly comparable to that of a diminution of starch.

The weight of the patient, his general symptoms or their lack, and the condition of the urine, taken together, will generally prove safe guides as to the judiciousness of the diet. Under a strict diet the sugar and polyuria, one or both, are practically sure to diminish, and may disappear. In a favorable case I expect to see the sugar disappear in two or three weeks, the weight increasing. How long a strict diet is to be maintained must depend upon the type of the disease, which, again, largely depends upon the age and nutrition of the patient. In milder cases I believe it to be wiser to keep the patient on a strict diet for one or two months, and then to test the tolerance for starch, giving first two or three ounces of bread daily and increasing the amount weekly as toleration warrants. In more severe cases which are rendered sugar free with difficulty one must be more

careful in allowing bread, and watch its effects even more closely. In the severest cases, in which the diet does not cause the sugar to disappear, it is ordinarily better to allow a fixed amount of bread. It is certainly so if under the strict diet weight and strength fall off. The sugar is then made from the nitrogenous food, or the body tissues and the danger of acid intoxication is increased.

A diabetic who loses weight does so for one of three reasons: His diet is not strict enough; or it is too strict; or, finally, the case is a hopeless one. Every case is a law unto itself. Severe diabetes is not a disease for a lazy doctor to treat, or for a careless or wilful patient to well endure.

As I have grown older I find that I have more and more discarded the use of diabetic breads. No diabetic bread which is palatable for any length of time is safe. We must always reckon with human greed for gold, and I much prefer to give ordinary or perhaps graham bread, the percentage of sugar-forming material in which is known, than to run the chance of deluding myself and my patients. I once visited incognito the agency of a well-known company which purveys for diabetics. "Have you bread for diabetics?" "Yes." "How much starch does it contain?" "None." "What! No starch?" "None!" My friend, Professor Wood, however, said the bread contained 60 per cent. of sugar-forming material. Gluten flour from another manufacturer had a low sugar-forming percentage one year and a high one the next.

If alcohol is considered desirable it is best given in the form of whiskey or brandy, a brut champagne, Moselle wine, or one of the California hocks, some of which contain practically no sugar.

I have never used the skinned-milk cure as advocated by Donkin. To remove the fat and leave the sugar does not seem consistent with common sense. I concede that it has worked well in some cases, but wonder if the explanation does not lie in the fact that these patients had been eating far too much and would have done equally well under a diet judiciously restricted in quantity as well as quality.

A day of starvation once every two or three months is very useful in some cases. Austin Flint's plan of keeping a patient in bed from Saturday night until Monday morning, fasting, has seemed to me a good one. If hunger is felt a little beef tea may be a comfort without really invalidating the fast.

The bowels should always receive careful attention. All the more so if acetone and diacetic acid reactions are present in the

urine. The skin also should not be neglected. Hot or vapor baths at home followed by active friction, a Turkish or Russian bath at a well-managed establishment, if the general state of the patient permits, are useful adjuvants, especially if the skin be harsh, dry, and inactive. Ralfe thinks he has succeeded in preventing impending coma by the hot bath. In milder cases, with the skin still relatively active, the tonic effects of a daily cool or cold bath, provided that reaction be prompt, thorough, and maintained, is of service. Diabetics are sensitive to cold, and wool or silk underclothing of light or moderate weight is usually desirable. I think we generally err in this country in the colder season by wearing too heavy underclothing. We keep our houses at summer temperature, and voluntarily load ourselves with clothing which we would think justified revolution if a czar compelled its adoption. A diabetic should have several overcoats of varying thickness and warmth, and can scarcely be too well wrapped up while driving in an open carriage, the only form of conveyance really fit to drive in, except in stormy weather.

Worry and anxiety are to be avoided so far as possible. Such avoidance is—alas!—only too often easier to enjoin than to secure; but we must do our best. The man of large affairs and responsibility must be helped to systematize his work, to throw every possible detail on subordinates, and to shorten his working hours. How many of us inspect the down-town offices of our patients in active business, in order to remedy defects of light, ventilation, and heating of the apartments where more time is passed than anywhere save in the bedroom? In many cases the sum of small advantages forms a large aggregate, and sunshine and open fires are better classed among the greater than the small advantages. In a word, we are dealing with a class of people whose resistance and vitality are more or less diminished; in many of whom, we have reason to believe, the nervous system is especially at fault. The desirability of moderating nerve strain is therefore obvious.

Muscular exercise is useful directly, in that it burns sugar; indirectly, in that it aids blood and lymph circulation. It is, therefore, peculiarly adapted to diabetics, provided that thought and intelligence govern its use. In excess it is potent for harm. Outdoor exercise is far better than in any confined space, if the condition and circumstances of the patient permit. As to the form—walking, golf, tennis, horseback—it must depend upon the purse and taste. We are all so constituted that what we enjoy is, on the chances, better tolerated than what we dislike. Calisthenics and the various forms and degrees of massage, care-

fully adapted to the individual patient, are for the severer cases. Patients debilitated from any cause rightly ask direction as to the amount of exercise they can take. If the intelligent co-operation of the patient can be secured, better results will follow, even in sanitarium treatment; and most diabetics are not, and cannot be, under constant supervision. The best rule I have been able to formulate is the following: The patient is told, "You exercise; you feel tired; you rest an hour and fatigue passes. That fatigue was physiological, healthy, beneficial. If, on the other hand, after you rest you are still tired, you have done too much."

A change of climate during our Northern winter, with all that such change carries with it in freedom from care and in the ability to be in the open air, may be of great importance.

I am painfully conscious of the sketchiness of these remarks, but try to derive some consolation from the thought that, after all is said, is not he the best practitioner of medicine who, reasonable diagnostic acumen being assumed, at the expense of his own grey matter most skilfully adapts general principles to the particular needs and circumstances of the special case? In passing it occurs to me to add that, unless my experience has been exceptional, it is unusual to observe a case of diabetes from start to finish. The very rapid cases are not very common. Others co-operate heartily for a time; the restrictions then become irksome, and they sometimes shun the doctor, partly because they see that he does not attach much importance to drugs, the giving of which still represents too largely in the public mind the function of the physician, and partly because they do not want to exercise the self-denial which they feel will be demanded of them. In the milder cases past middle life perhaps no great harm results. It is the cases of medium severity which are most apt to suffer from this ostrich-like procedure. We can roughly classify our diabetic patients into those of (*a*) severe; (*b*) moderately severe; and (*c*) mild type.

The classification of any given case can usually be more accurately made after than before a suitable diet is enforced, as some cases prove more or less manageable than we expect when we first see them. And yet, classify as we will, there is every possibly gradation between the extremes.

I trust that a few illustrative cases will not trespass too much upon your patience. A patient under twenty is sure to be of the severest type, and is, with very rare exceptions, beyond hope; and yet life may be prolonged even for ten years, as in a young man of exceptional resolution and force of character whom I

saw several times. A rigid diet should be enforced as long as it can be tolerated and strength and weight are maintained.

1. Two years ago I saw a girl of ten. Polyuria and sugar had recently and inexplicably appeared. Under strict diet she became sugar free for a considerable time. She now, under the same diet, passes about 50 ounces of urine, containing 8 per cent. of sugar, looks and feels well, and has held her weight.

2. A school girl of eighteen spent Christmas vacation at home and appeared to her mother as well as usual. She returned to boarding school and soon complained of extreme hunger and thirst, with increasing lassitude. Polyuria was also noted. She lost flesh rapidly, and was sent home Jan. 27th. She passed four quarts of urine in the twenty-four hours following her return, and the amount of sugar was 4.6 per cent. There were marked acetone and diacetic acid reactions. In spite of large doses of bicarbonate of soda, and without much change in diet, she went into coma, and died Jan. 30th, three days after her return from school. The whole process, as nearly as could be ascertained, was of a little less than a month's duration.

3. A man now thirty-eight, active, florid, muscular, weighing 206, consulted me seven years ago for marked polyuria and 4 per cent. of sugar. The polyuria was recent, but the sugar was probably of older date, as he had had eczema of the penis the previous summer. Under strict diet in two weeks the urine became normal. There was a slight loss of weight. He now weighs 175 to 180. He is in good general condition, in spite of extreme and unavoidable business worries and hard work the past four or five years. He has relaxed, and again restricted his diet, sugar reappearing in the urine with less provocation than formerly. I doubt if he will attain old age, though I hope I may be mistaken.

4. A woman of forty-one, weighing 185, entered the hospital in July, 1891, for sciatica. She had a moderate polyuria with about 1 per cent. of sugar, varying from day to day. Under treatment the sugar disappeared from the urine, and she was discharged much relieved after a month in the hospital. A brief record in 1897 states that she was looking well, sugar present. Two other records the same year show sugar in her urine in amounts varying from 1 per cent. to 1 1-2 per cent. She entered the hospital again in December, 1903, saying she had taken no special care of herself, except to avoid sweet stuffs. During her two weeks' stay in the hospital this time the urine varied between 42 and 72 ounces, the largest amount of sugar being 6 per cent., the lowest, under strict diet, 6-10 of 1 per cent.

She was discharged at her own request, the urine still containing sugar; no acetone or diacetic acid reaction at any time; weight, 175. In twelve years she seems to have lost no ground, and her case is probably to be classed as a favorable one.

5. Seven years ago a man, then sixty-three, of large business responsibilities, first consulted me. Ten months before that a competent observer had found no sugar in his urine. I found a moderate polyuria, and a percentage of sugar. Weight 184. He was easily rendered sugar free, and after a time could tolerate a moderate amount of starch. From time to time he broke loose, has gradually developed a marked arterio-sclerosis, which last spring led, through rank imprudence, to a uremic attack. This has necessitated some change in his diet, and he has never fully regained the weight he lost last spring, now weighing 165, and passing about 2 per cent. of sugar without polyuria. He feels well and is in active work, having few mental resources outside of his business.

6. Shortly after this his brother, one and a half years younger, came to me with great polyuria and much sugar, recent in onset. All symptoms disappeared rapidly under diet, and I have not seen him professionally for six years. About that time he was elected to Congress, and has been since active in political and campaign work, feeling very well with moderate dietary restriction. These brothers are fair examples of diabetes coming on after middle life, in well-nourished though not obese persons—the milder type of the disease. It is usually not necessary to enforce an absolute diet in such cases long; moderate restriction can then be allowed. Some of these cases can later return to practically an ordinary diet without reappearance of sugar. The experience of all of you can, doubtless, duplicate such cases as I have sketched.

In the young, treatment can at best only delay the fatal result. In those in the prime of life great service can generally be rendered, though actual cure occurs only in the minority of cases. In those past middle life the disease is usually well tolerated, and may be of comparatively little moment, provided that reasonable care be exercised; and yet, now and then we encounter cases the course of which proves other than first impressions would lead us to expect.

## SOME NOTES ON GASTROPTOSIS WITH SPECIAL REFERENCE TO ITS RELATION TO PREGNANCY.

BY GRAHAM CHAMBERS, B.A., M.B.

Among the causes of gastroptosis in women, pregnancy, and especially repeated pregnancies, is one of the most active. This causal factor is more marked when the pregnancies occur at short intervals.

The process by which pregnancy tends to produce this displacement of the stomach is probably in some cases complex. Abdominal flaccidity following parturition, preceded by increased intra-abdominal tension during pregnancy, must, I think, be looked upon as the most active factor in these cases; but there are no doubt other causative agents, such as emaciation, flat chest, congenital weakness of the nervous system, and tight lacing, which act concomitantly with it.

Although after parturition there is a tendency to downward displacement of the abdominal organs, it is a common observation that when a patient suffering from gastroptosis becomes pregnant the condition of the gastric digestion is improved. The subject under consideration may therefore be conveniently discussed under two headings:

- (a) Pregnancy as a cause of gastroptosis.
- (b) Pregnancy in the treatment of gastroptosis.

*Pregnancy as a Cause of Gastroptosis.*—Flaccidity of the abdominal wall following pregnancy no doubt tends to cause a downward displacement of the abdominal organs. Naturally, the more frequently the pregnancies occur the stronger this causative factor becomes. In some women repeated pregnancy has very little if any effect on the position of the abdominal organs, while in others the result is marked. This condition can only be explained by taking into consideration other causative factors. Of these the condition of the nervous system is, I think, the most important. Some form of depression of the nervous system is frequently present and this tends to diminish the tone of the ligaments of the abdominal viscera as well as that of the abdominal wall.

The symptoms of downward displacement of the abdominal organs or enteroptosis are very variable. In some cases, though I think they are uncommon, the patient has little or no

complaint. In others the stomach, the kidneys, the uterus, etc., may one or all be at fault.

In these notes I shall refer more particularly to the symptoms of downward displacement of the stomach, or gastrophtosis, in women.

According to my experience, downward displacement of the stomach is a cause of a considerable proportion of the cases of indigestion in women who have born children.

The gastrophtosis in these cases is usually accompanied by downward displacement of other abdominal viscera, which no doubt increases the digestive disturbances.

The subjective symptoms referred to the stomach, of gastrophtosis are of very little use in determining the nature of the disease.

The functions of the stomach are frequently disturbed. In the majority of the cases the gastric secretion is increased, but normal or diminished secretion is not uncommon. The motility of the stomach is probably always depressed.

In this type, as in all cases of gastrophtosis, the physical signs are the most important in diagnosis. The abdomen is flaccid, and one is frequently struck with the ease with which right kidney, and in some cases other abdominal organs, may be palpated. In this connection I may state that during the last two years I have been on the outlook for patients with palpable pancreas. In two cases I could feel the head of the organ very distinctly and in many others indistinctly. The patients in whom this sign is found are emaciated and have flaccid abdomens, with downward displacement of the stomach.

The most important physical sign in gastrophtosis is the recognition, by inspection, of the position of the stomach. Both the curvatures of the stomach are lower than normal and the lesser is frequently visible.

This character can readily be made out by inspection after inflation of the stomach. All that is necessary in many cases is to have the patient drink a glassful of soda water and then breathe deeply, when the distended stomach may be seen moving up and down in the abdomen. The position may also be determined by means of the splashing sound and auscultatory percussion.

Indigestion is not the only complaint of these patients. They are weak and reduced in flesh and suffer more or less from neurasthenia. Emaciation and weakness are very common symptoms. So constant is this the case that when a thin married woman consults me on account of indigestion I always think of gastrophtosis as a likely cause of her complaints.

Moreover, while the patient is under treatment I always give special attention to this character. If there is an increase of weight the treatment is successful, even if the patient continues to suffer from indigestion. The deposition of fat not only indicates that the treatment is correct, but by increasing the intra-abdominal tension favors the further treatment of the disease.

The nervous symptoms are usually very marked in this type of patient, and are referred to the brain, spine, kidneys, pelvis, heart and other organs of the body. They usually cause the patient a great deal of distress. Frequently it is for the relief of these symptoms that the patients seek advice. Gastric symptoms are present, but are insignificant in her opinion compared to the pain in the back, headache, palpitation of the heart, and other symptoms of neurasthenia.

It is on this account, I think, that mistakes are sometimes made in the treatment of these cases. For instance, I have had patients suffering from downward displacement of the abdominal organs who had been operated on for movable kidney, diseased ovaries, laceration of the cervix of the uterus, etc., without receiving any benefit. In one case hysterectomy had been performed. In some of these cases I am satisfied the nervous symptoms were greatly aggravated by the operations.

With regard to the relation of the nervous manifestations to the stomach, a vicious circle may be said to exist, as the downward displacement of the abdominal organs tends to produce indigestion and neurasthenia, and the latter disease augments the digestive disturbance. That such a sequence is present I have frequently obtained clinical evidence, as the application of a perfectly fitting abdominal support relieved not only the gastric disturbance, but almost immediately the neurasthenic symptoms. This is particularly true of cases of gastrophtosis of recent origin. The following clinical notes of a case will be of interest in this connection:

Case 1.—Mrs. A., mother of three children. After the birth of her second child, in 1900, she suffered from indigestion, sleeplessness, pain in the back, etc., and was unable to nurse her child. The patient remained in poor health for about two months and then gradually regained her health. She became pregnant again in 1901, and the condition of her health was good until two weeks after her third child-birth, when she began to suffer from indigestion, with vomiting, weakness, lightness in the head and extreme nervousness. The symptoms referred to the abdomen were to me of a rather unusual character. She complained of a bruised feeling around the waist and of a

very uncomfortable sensation like as if all the organs of the abdomen were hanging from the heart.

An examination of the patient revealed the presence of a very flaccid abdomen, ptosis of the stomach and movable right kidney. The abdominal bandage was applied and rapid improvement took place. In two weeks she was able to do her household work and to nurse her child. She continued to wear the bandage for nearly a year and then she was able to get along without it. During the earlier part of her illness the patient found that if she removed the bandage the weakness, indigestion, etc., began to reappear.

*Pregnancy in the Treatment of Gastroptosis.*—A pregnant uterus increases the intra-abdominal tension, and one should expect that when a woman suffering from gastroptosis becomes pregnant the condition of the patient to improve. That such is the case I have frequently obtained evidence in the histories of patients who have told me that during their pregnancies the condition of their digestion was greatly improved. Moreover, during the last two years I have watched the improvement in several cases, the history of one of which I shall give below, and by lengthening the period of confinement in bed after labor as well as by careful bandaging, attempted to retain the advantage in health gained during gestation.

The following are short clinical notes of the case:

Mrs. C., aged 30, mother of three children, consulted me in 1901 on account of indigestion. Patient was very thin and had poor health with indigestion since her second child was born. An examination revealed the presence of gastroptosis and movable right kidney. I ordered an abdominal bandage and a diet and medicines suitable for the disturbed functions of the stomach. Her gastric symptoms were relieved and she gained a few pounds in weight. About six months afterwards the patient became pregnant and discarded the abdominal support. During her pregnancy the state of her health was greatly improved and she gained considerable in weight. After the birth of her child she remained in bed or reclined on a couch for six weeks, and during this period an ordinary bandage was carefully applied to the abdomen. Then she wore an elastic support for two months. Since that date she has had good digestion and has retained the increase in weight gained during pregnancy.

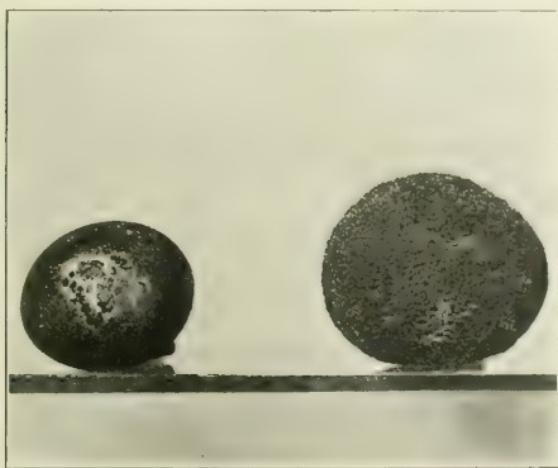
## URINARY CALCULUS.

By J. F. UREN, M.D., TORONTO.

Urinary calculus is one of the abnormal products of nature's wonder-working laboratory. So far as the patient was aware, for several years previous to its removal he was in perfect health.

After his illness he remembered having had slight pains in the glans penis. On Sept. 24th, 1902, the patient consulted Dr. W. J. McCollum, to whom I am indebted for the case and for these notes.

Mr. E., aged 77, fairly well preserved, family history



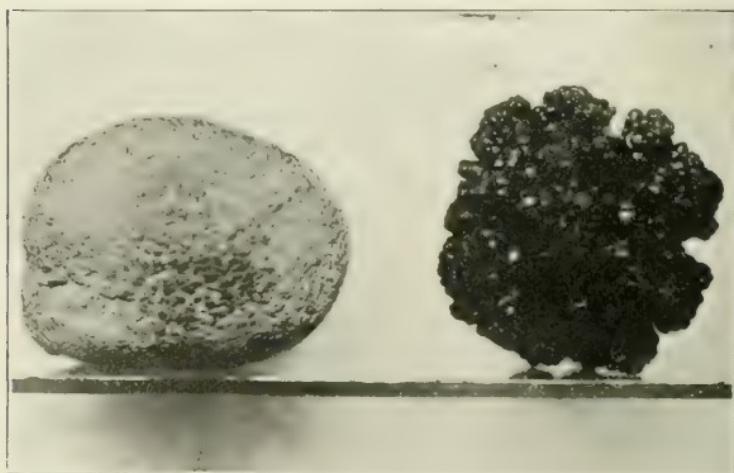
not relevant. He had a slight illness five years ago and with little done for him but rest, he fully recovered. He does not give a very clear account of the symptoms, but there was no difficulty referred to the bladder.

About thirty-five hours before his operation the patient found himself suddenly unable to urinate. His physician easily relieved him with a soft rubber catheter. Twelve hours later he was again catheterized with more difficulty by means of a gum elastic catheter. In twelve hours he was again in difficulty and

sent to the St. Michael's Hospital, where, in spite of several efforts, we failed to catheterize him.

On rectal examination a very large prostate could be felt. The patient was in great distress, the bladder distended to the umbilicus, and the urethra sensitive and strongly contracted. He was advised that an operation was necessary and he was immediately prepared.

On opening (Sept. 26th) the bladder suprapubically we immediately came on the stone encysted in the upper and posterior aspect of the bladder wall. It was freed from its adherent tissue and with some difficulty, on account of its numerous mulberry processes, brought through the abdominal wall.



The softened and engorged prostate pushed the bladder upward and surrounded it so that the finger could be passed into a funnel shaped lower part of the bladder for two inches at least. On account of his condition no attack was made on the prostate.

The bladder was irrigated with boracic acid and drained through the wound.

Convalescence was uneventful, and Mr. E. is still enjoying his nearly four-score years. The stone is a black oxalate of lime, mulberry formation, weight 583 grains, and is a most beautiful specimen.

**NEW ERA IN MEDICAL TEACHING.—UNIVERSITY OF  
PENNSYLVANIA ABOUT TO DEDICATE MOST  
COMPLETE MEDICAL LABORATORY IN  
AMERICA.**

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BY GEO. E. NITZSCHE.

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(Specially prepared for the DOMINION MEDICAL MONTHLY.)

The last quarter of the nineteenth century witnessed the conversion of the teaching and practice of medicine from a theoretical to a practical and demonstrative basis. This momentous change, than which nothing more revolutionary and beneficent has been achieved in the history of the intellectual development of the race, has been the result of the establishment of laboratories in which research in medical science might be conducted. By means of the facilities offered in these laboratories, workers have not only enormously increased our knowledge of the structure and functions of the human body and of the nature of disease, but have provided methods which have already robbed some of the most direful pestilences of their chief terrors. Hitherto America has scarcely kept pace with foreign countries in the provision for scientific studies in medicine and in incentives to the prosecution. While this aspect of medical education has not been wholly disregarded in this country, the limitations placed upon institutions of learning by their inability to provide adequately out of their means for the support of laboratories, has had a detrimental effect upon the growth of American medicine. In other countries, the national and municipal governments have done what in this country is left to private inclination and benefaction.

In view of these contingencies the University of Pennsylvania has constructed a new medical laboratory, which will be formally dedicated on June 10th, 1904. In completeness and equipment this new building is without rival. It provides for the teaching of students and the carrying on of research work on physiology, pathology, and pharmacology, in which departments of medicine the greatest advances have been made in the past and may be predicted for the future.

The opening of these laboratories is not simply of local but of national interest. About four years have been occupied in

the construction of the building, which, exclusive of its ground and equipment, has cost in the neighborhood of \$700,000. The erection of a new medical hall, an anatomical building, and auxiliary buildings, which will adjoin the building about to be dedicated, is also contemplated in the near future. These, with the present hospitals and clinical laboratories, will form one of the most extensive systems of buildings devoted to the teaching of medicine in Europe or America.

The new building is quadrangular in shape and is located on the south side of Hamilton Walk, between Thirty-sixth and



NEW MEDICAL LABORATORY BUILDING.

Thirty-seventh Streets, on the site of the old Veterinary Hall and Hospital. The building is two stories in height above a high basement, and measures 337 feet in front by nearly 200 feet in depth. The long front faces north, securing a maximum amount of the best light for laboratory purposes. All along the front are arranged small rooms for research, professors, assistants, etc. These open into private corridors, so that those employed in these rooms may pursue their work without interruption from those passing through the main halls.

Perfect lighting of all the laboratories has been obtained.

the courts being large enough, with the low front building, to furnish good north light to the laboratories of pharmacy and pharmacodynamics on the first floor, and to the large laboratories on the second floor devoted to pathology, where microscopic work is to be done—the north front of these rooms facing on the courtyard being almost wholly of glass and extending higher than the front so that steady north light will be thrown to the back of the room.

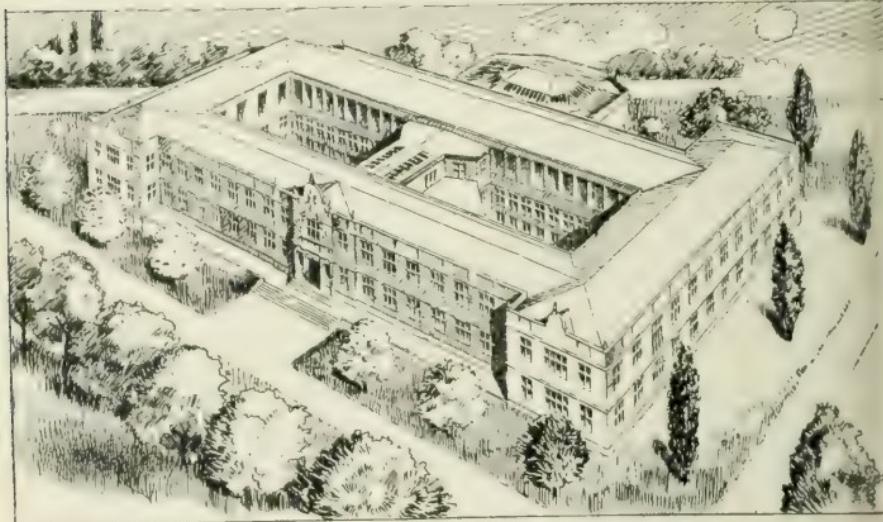
The first floor of the new laboratories is to be devoted to physiology and pharmacodynamics. The basement rooms are also well lighted. Here will be located locker, recreation and toilet rooms for the students, janitor's quarters, rooms for practical instruction in physical diagnosis, and bandaging rooms for sub-section teaching in physiology, store rooms, research rooms, etc.

The department of physiology on the first floor will have provided one large room in which there will be ninety cabinets fully equipped with such apparatus as is required in the practical exercises in physiology carried on by the students. Three rooms have been specially constructed and equipped for aseptic operations on the lower animals, one of them being a preparation room for the operator, another a preparation room for the animals, and another for operating. These will be equipped with the most modern appliances, so that operations may be carried on under the most favorable conditions known to modern surgery. In the north front are a number of small rooms which have been set apart for the professor and his assistants, for instruction in advanced physiology, etc. A well equipped shop has been provided for the construction and repair of apparatus. In the east wing are a number of rooms for sub-section teaching, etc., in special departments in physiology—digestion, circulation, respiration, calorimetry, nerve-muscle, special senses, etc., respectively. There has also been provided a photographic dark-room, and an adjoining room for projection and other optic apparatus, the importance of which in the making of diagrams, charts, and lantern slides, will be apparent.

The department of pharmacology has also been provided for on the first floor. This contains one large laboratory for practical pharmacodynamics, a large laboratory for practical pharmacy, a museum, a library and various rooms for the professor and his assistants, for research work, etc.

The second floor will be devoted exclusively to pathology, with temporary accommodations for the professors of other departments until the completion of future building operations.

looking to the final transfer of the entire medical school to buildings adjacent to the present new building. An examination of the plans will reveal the general purposes of the floor. Aside from the provisions for lecture rooms, the chief purpose of the plan of operation and construction looks to laboratory instruction. The entire north front of the building (with the exception of the temporarily arranged private rooms for various professors and the general pathological office) is devoted to laboratories for advanced students in experimental pathology and pathological bacteriology and the special research and assistant's rooms. The east wing accommodates the laboratory of advanced pathological histology and a seminar and journal



BIRD'S EYE VIEW NEW MEDICAL LABORATORY BUILDING

room; the west wing is occupied by the pathological museum, the gross morbid anatomy demonstration room, a room for museum preparation, photographic rooms and rooms for animal operations. The museum and gross morbid anatomy demonstration rooms are in close proximity to the large class laboratory of pathological histology in the west end of the southern part of the building for the obvious purpose of closely relating the instruction carried on in each. This last laboratory, that of pathological histology, the front of which consists almost entirely of glass, is located so as to face a spacious court to the

north, thus ensuring excellent and uniform light and admirably adapting it for microscopic work carried on by a large class. In a similar section of the building, east of the central hall, with similar front arrangements to ensure light for microscopic work, are located two smaller laboratories to be employed in the teaching of surgical pathology, neuropathology and clinical pathological technology; and private rooms for the instructors of those branches are arranged to open upon these larger laboratories. In order to provide for special occasions when a larger body of men are likely to require temporary accommodation than is ordinarily contemplated in either of these laboratories, it has been arranged that a movable partition may be withdrawn so as to throw the two rooms into one. In addition to the above apartments a number of small rooms devoted to storage or special technical work are provided upon this floor or elsewhere in the building in connection with the general chair of pathology.

Besides the numerous laboratories, research rooms, etc., there are two demonstration and two lecture rooms in the building. The two demonstration rooms each seat 185 students. These rooms communicate with two preparation rooms each. At the rear of the building there are two large lecture rooms, each seating 400 students. Students enter these rooms from a landing at the main stair midway between the first and second floors. The floor of the lecture rooms are on a level with the basement, and the lecturer will enter directly from the basement level, and all specimens needed to illustrate the lectures will be brought through this entrance, thus saving the crossing of the halls through which classes move. The most modern apparatus has been installed for light and heat and ventilation.

The architecture is distinctly "Pennsylvanian," and conforms to that of the dormitory system, the new law school building, gymnasium, engineering hall, and the stadium of the University. It forms at present one of the most imposing sights in Philadelphia.

## Selected Article

### DIETETIC TREATMENT OF CHRONIC NEPHRITIS.\*

BY VICTOR C. VAUGHAN, M.D., ANN HARBOR, MICH.

The most reasonable hope of doing this lies in making a radical change in the proteids of the food.

Before going into this, however, I wish to make some brief statements concerning the employment of medicinal agents in chronic nephritis. I am led to do this for fear that it may be thought that I would discard all drugs as valueless, and this is far from my opinion. No one of experience can deny the value of digitalis in passive hyperemia of the kidney due to disease of the heart, and which is often accompanied by albuminuria and more or less extensive dropsy. Indeed, these are the cases of so-called Bright's disease that are so satisfactorily treated by the proper administration of heart tonics, the best of which, so far as these cases are concerned, is, in my experience, digitalis. Neither can one of experience deny that great and more or less lasting good is secured by the administration of hydragogue cathartics, such as elaterium. Under the proper employment of this drug and the subsequent use of heart tonics, I have seen extensive edemas of the lower extremities wholly disappear, and the patient able to return to his work and continue at it for years. Furthermore, the value of mercury in syphilitic diseases of the kidney and the benefit of quinine in malarial nephritis cannot be questioned. We must always strive in the treatment of any disease to find the causative agent, and direct our treatment accordingly. It is true that we may empirically discover a cure while the cause remains unknown, as has happened in the treatment of both malaria and syphilis, but happy hits of this kind are not to be expected to occur with any great frequency. However, just this thing has, if I may express it, partially happened in the dietetic treatment of chronic nephritis, inasmuch as the milk diet in this disease was tried with more or less success long before we knew anything of the differences between the proteids of milk and those of meat.

\*Abstract of paper read at meeting of the Washington State Medical Association, Spokane, September, 1903.

Clinicians generally recognize the importance of diet in chronic nephritis, and much has been written on this subject. Thus, Pel says: "The question, what diet shall we prescribe for our patients with kidney disease, is of great practical importance, because I know of no organic disease in which the manner of life and food so largely influences the course of the disease as in chronic nephritis." And still there is the greatest difference of opinion among these same clinicians when it comes to the point of saying just what foods shall be prohibited and what allowed. It may not be amiss to briefly refer to some of these differences. As a rule there is agreement that a meat diet is harmful, and yet at least one writer recommends an exclusive meat diet, but this is so generally condemned that we may overlook it altogether. Some of our most recent authorities lay but little stress upon the desirability of restricting meat, or omit mention of it altogether. In discussing the treatment of what he calls chronic productive nephritis (intestinal nephritis), Delafield says: "As regards the diet, the quantity of sugars and starches taken should be restricted, and the ingestion of fats encouraged. The use of wine, spirits and tobacco should be discontinued," and this is all he has to say about diet in the treatment of this form of nephritis. Under the head of chronic productive nephritis with exudation (parenchymatous nephritis) he is even more brief, for he contents himself with the following: "For the nephritis the patient should be kept in bed and placed on a fluid diet." Under the treatment of chronic parenchymatous nephritis, Osler gives one sentence to diet, and this reads as follows: "Milk or buttermilk should constitute the chief article of food," and under interstitial nephritis, he says: "The diet should be light and nourishing, and the patient should be warned not to eat excessively, and not to take meat more than once a day. Care in food and drink is probably the most important element in the treatment of these early cases."

All have heard of the interdiction of dark meats, but von Noorden claims that the distinction between light and dark meats, so far as they affect the kidney, is a myth. Fish is condemned by Bouchard on the ground that it contains toxins and increases the toxicity of the urine, but is permitted as a substitute for beef by Klemperer, while Pel thinks that we should distinguish between the kinds of fish, and sees no reason for the exclusion of easily digested species from the dietary of the nephritic. Ortner forbids every part of the calf except the sweet-breads and the brain, while Kolisch thinks these the very organs that should be excluded on account of their large nuclein con-

tent. There seems to be a general condemnation of game, even when the flesh of domesticated animals is permitted either with or without restriction. Why the flesh of the quail, grouse or other wild bird should be so much more harmful to the renal cells than that of the barnyard fowl, no one, so far as I know, has attempted to explain. Probably the interdiction of game is due to an unconscious effect of the old theological dogma that whatever man enjoys is bad for him.

The differences of opinion about the placing of eggs on the menu of the chronic nephritic are quite as marked as those concerning meat. Early in his career as a clinician, Senator prohibited eggs because it has been shown that a more or less lasting albuminuria could be induced in experimental animals by the intravenous injection of solutions of egg-albumin, also that a like albuminuria might result in man by swallowing a large number of raw eggs, but in later years he has seen that his conclusions were hardly justified by the data, and now permits that article of diet in moderation. Oertel and others have found the eating of eggs in moderation may be granted to the nephritic.

The exclusive milk diet has been greatly lauded by some, and milk as an important article of food is not only generally permitted, but is prescribed. "*Le régime lacte absolu*" of the French has been probably more frequently prescribed and less frequently followed than any other diet prescribed in chronic Bright's disease. Generally, however, the prescription is given in the words of Dieulafoy, who says: "Follow the milk diet as absolutely as possible." It has been said that a pregnant woman who follows an absolute milk diet for weeks never has eclampsia. As to the truth of this statement, I cannot testify, because I never knew a pregnant woman to follow such a diet, but Pel states that he has known eclampsia to occur when the milk diet has been "very closely" followed. An exclusive milk diet has been in my experience an impossible thing to secure with nephritis, and, moreover, I do not believe that it is the best. Many clinicians have had a like experience so far as the difficulty in carrying out this regime is concerned, and some think that it is harmful in its effects.

On this point Pel makes the following statement: "This exclusive diet is not well borne by many, and disturbances in the functions of the stomach and intestines occur not infrequently. Everyone does not bear it well, and idiosyncrasies are seen. Moreover, we must not forget that on this diet one obtains too much water, much phosphoric acid, much albumin, and too little iron for the needs of the organism. Not infrequently there is an un-

desirable increase in adipose tissue, and a decrease in hemoglobin, especially when the individual has a predilection for the accumulation of fat or toward anemia. Three litres of milk contain more than 100 grams of albumin, from which more than 30 grams of urea will be formed, and still we are cautioned against an excess of proteid. Furthermore, I think the amount of phosphoric acid, which varies from three to four grams daily, is harmful to the kidneys. Von Noorden suggests that the phosphoric acid may be partially eliminated by the addition of lime water, which forms an insoluble phosphate, and this is eliminated by the bowels. The deficiency of iron can be made good by the administration of medicinal preparations, but still the large amount of water may be harmful. To many patients with contracted kidneys, and whose blood pressure is high, whose vessels show the well-known changes, and who are already cachetic, the drinking of so much milk is directly harmful, for the blood pressure is further increased, the hydremia is intensified, and the diseased heart still further endangered. Still further, the increased water acts as an unnecessary and undesirable irritant upon the kidney, and especially upon the glomeruli. For these reasons the amount of milk taken daily should be limited to from one to one and one-half litres daily, especially in contracted kidney, and in those cases of parenchymatous nephritis where the amount of urine is small and the anasarca great; in these the dropsy will be increased because the water will not be eliminated, but will accumulate in the subcutaneous tissue." While I do not agree with all the statements in this quotation, I believe that the argument against exclusive diet is well put. Pel concludes his argument in favor of a mixed diet, and on this point I certainly do not agree with him.

Passing on to the consideration of vegetable foods, we find the same differences among writers. Pel cautions us against those fruits and vegetables that contain benzoic acid, such as plums and green vegetables, but if anyone has shown that the small amount of benzoic acid found in the few plums that a patient would consume at a meal or in a day would be at all harmful, I am not aware of such a demonstration. Asparagus has been condemned, I suppose, because it imparts an odor to the urine. Certainly I know of no other reason for this interdiction. Certain vegetables have been condemned on account of their large potassium content, but as Pel states, it was formerly the custom to give saltpetre in doses of half an ounce per day without any evidence of harmful action on the kidneys.

The diet which I have found most serviceable in chronic ne-

phritis is, with the exception of cream and butter, wholly vegetable. I forbid meat in any and every form, eggs and milk. As I have already stated, the object which I desire to accomplish is to profoundly alter the proteids in the circulating blood, and both theoretically and clinically I believe that I have the best of reasons for the selection of this diet. The urine for twenty-four hours should be collected and the quantity of albumin in it should be accurately determined, and the result expressed both absolutely and in percentage. At the same time the amount of urea and of total nitrogen should be ascertained. Then the patient should be placed on the diet, and after three days or longer corresponding analyses should be made. The diet permits cream, which should be separated from the milk as completely as possible, and should not contain more than 1 per cent. of proteid, and the amount of cream allowed per day is limited to 500 grams, or one pint. Corn meal mush I prefer among the cereals, and this is allowed *ad libitum*, and oat meal or cracked wheat may be substituted. Sugar is allowed *ad libitum* for the mush, and Zwiebach and butter and potatoes complete the substantials of the ration, although I permit the leguminous peas and beans, either fresh or canned, green vegetables, fruits and melons. There is no difficulty in living on such a diet, and after a few weeks patients lose all desire for meat and eggs and wonder why they were formerly so fond of them. That the necessary calories are furnished by this is shown by the following table:

	Protein	Carbohydrate	Fat
500 grams of cream.....	5	27.60	150
200 grams corn meal .....	20	130.60	8
100 grams Zwiebach.....	14	60.00	24
50 grams butter .....	...	.....	40
20 grams sugar .....	...	20.00	...
	—	—	—
	39	238.20	222

This gives 39 grams of protein, 238.2 grams of carbohydrate and 222 grams of fat. The caloric value of each gram of protein and carbohydrate is 4.5 and of each gram of fat is 9; therefore the calories represented in this ration are shown by the following figures:

$$\begin{array}{r}
 39 + 238.2 = 277.2 \times 4.5 = 1274.4 \\
 222 \times 9 = 1998.0 \\
 \hline
 3245.4
 \end{array}$$

It will be seen that this ration furnishes more than 3,000 calories, and we have taken no account of fruits and melons. Fur-

thermore, the proteids can be increased by substituting in part leguminous for cereals, or by substituting oat meal or wheat for the corn meal. I have had hard-working-men live on this diet with ease, and at the same time the amount of albumin in the urine has gradually decreased.

The proper thing to do in order to scientifically demonstrate the value of any diet in chronic nephritis will be to test the relative toxicity of the blood serum of the patient on animals, with especial reference to its action on the kidneys of the animals, under different diets. This has not been done, but it offers a promising field of research to the young and enthusiastic student of pathology.

I regard the selection of a diet in chronic nephritis quite as important as it is in diabetes, and so far as my experience goes in the management of both of these diseases, diet is the most important thing. The digestive organs of the chronic nephritic need to be watched closely. Lavage of the stomach is often indicated, and an analysis of the gastric juice should be made in all cases. The bowels must be kept in good condition, but copious purgation, except during exacerbations, or for the removal of dropsical accumulations, or in threatened uremia, is not desirable or beneficial. I have already spoken of the value of elaterium and other hydragogues when free catharsis is needed.

The skin should be kept in a normal, but not too active, state. I think that the hot bath is in some cases given too frequently. Of course, one case gives no rules to govern the frequency of the hot bath, because so much depends upon the condition of the patient. As a rule I recommend the hot bath (temperature above 90 degrees F.) two or three times a week, and a Turkish bath once a month. Flannel underclothing, medium to heavy in the winter and light in the summer, is prescribed, but I do not insist, as some do, that the patient should sleep between blankets in hot weather. Blood counts and hemoglobin estimations furnish evidences that may be of value and should not be neglected.

The only reason that I have for writing this paper lies in what I have said concerning the nature of chronic nephritis, and its dietary treatment. On these points both my study and experience have led me to conclusions that differ from those held by others who have written upon the subject.—*Northwestern Medicine*, September, 1903.

## Reports of Societies

### ONTARIO MEDICAL ASSOCIATION.

June will bring to us the twenty-fourth annual meeting of the Ontario Medical Association. Under the presidency of Dr. J. F. W. Ross and with Dr. A. A. Macdonald and Dr. Allan Barnes as the respective Chairmen of the Committees on Papers and on Arrangements, the success of the meeting is already practically assured.

The sessions will be carried on during three days, June 14th, 15th and 16th.

An outline of the provisional programme includes the following list of papers, a number still awaiting acceptance:

"Prophylaxis of Diabetic Coma," Dr. John Caven, Toronto.

"Uncertainties of Diagnosis and the Necessity of Early and Vigorous Treatment of Diphtheria," Dr. McMahon, Toronto.

"Anemias, More than Ordinarily Severe," Dr. Frank Trebilcock, Enniskillen.

"Modified Smallpox," Dr. Charles Hodgetts, Toronto.

"Electro-Therapeutics," Dr. Lipsey, St. Thomas.

"Functional Heart Murmurs," Dr. Rudolf, Toronto.

"A Case of Landry's Paralysis," Dr. Hugh McColl, Milton.

"Inflammations of the Laryngeal Apparatus," Dr. G. H. Burnham, Toronto.

"A Discussion of the Subject of Life Insurance from the Standpoint of the Expectancy of Life in Conditions of the Various Systems," to be participated in by Dr. E. Ryan, Kingston; Dr. R. J. Dwyer, Toronto; Dr. H. R. Frank, Brantford; Dr. B. L. Riordan, Toronto; and, it is hoped, two physicians associated with large insurance companies in Canada.

"A Restatement of the Attitude of the Profession toward Placenta Previa," Dr. McIlwraith, Toronto.

"Myxomatous Degeneration of the Chorionic Villi," Dr. C. J. Hastings, Toronto.

"Occipito-Posterior Positions in Obstetric Practice," Dr. A. A. Macdonald, Toronto.

"Anomalies in Fetal Development, with Exhibition of

Specimens and Descriptions of Cases," Dr. J. Peters, Hamilton, and Dr. F. J. R. Forster, Caistorville.

"Clinic upon Diseases of the Skin," Drs. McPhedran and H. B. Anderson, Toronto.

"An Exhibition of the Methods of Intestinal Anastomosis, dealing especially with the Elastic Ligature," Dr. N. A. Powell, Toronto.

Tumors of the Prostate Gland—

"Etiology, Symptoms and Pathology of," Dr. F. W. Marlow, Toronto.

"Surgical Relief of," Dr. G. A. Bingham, Toronto.

"Lithotomy *versus* Lithotrity," Dr. Chas. Shuttleworth, Toronto.

"Thiersch's Method of Skin Grafting," Dr. Primrose, Toronto.

"Report of a Case of Congenital Dislocation of Both Hips treated by Lorenz Method, and Exhibition of Photos, Skia-graphs and of Patient," Dr. H. P. H. Galloway, Toronto.

"Some Cases Illustrating Difficulties of Differential Diagnosis and Treatment of Tumors," Dr. Wm. Oldright, Toronto.

Of the distinguished visitors who are to be present, Sir Frederick Borden will discuss "The Evolution of the Medical Department of the Militia of Canada and the Possibilities of its Future Development"; Sir Wm. Hingston, a paper dealing with the subject of "Cancer."

Papers are promised by the following gentlemen, but the titles are not yet known: Dr. H. A. Bruce, Toronto; Dr. Hodge, London; Dr. Perry Goldsmith, Belleville, and Dr. Elliott, Gravenhurst.

The Committee hopes to announce presently as guests of the Association the names of two of the foremost men in the United States.

A very pleasant feature of the meeting will be the tenth class reunion of 1894, Toronto University, under the presidency of Dr. W. J. McCollum. Between thirty and forty men have already signified their intention of coming to the city that they may conjointly meet as a class and attend the sessions. The yearly meeting of the Association ought to serve as a nucleus for many such reunions.

The Committee on Arrangements, notwithstanding the success attending the meeting of last year, promises a programme of entertainment that will be in keeping with the larger interest exhibited in the forthcoming meeting of this year. We want

every medical man in the Province that can get away from duty to be present.

The fusion of collegiate interests into one grand college, one of the largest on the continent, offers a special setting for the meeting of this year. Additional interest is due to the fact that the meetings will be held in the New Medical Buildings, where an opportunity will be available of seeing what has been accomplished in the advancement of medical education in the Province.

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## Therapeutics.

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### A New Method of Treating Foreign Bodies in the Cornea, as Evinced in the Treatment of 808 Recent Consecutive Cases.

Edwin M. Fuller, in *The Journal of Medicine and Surgery*, advocates a new departure in the treatment of the cornea when foreign bodies have become imbedded therein, which consists in denuding the cornea at the point where foreign bodies have been removed. In the series of 808 cases thus treated there were but two corneal scars left after the cases were discharged.

The cases upon which Dr. Fuller has followed this treatment have resulted from flying bodies of steel, iron and emery travelling at great speed and nearly always red hot. To remove both the foreign body and the burned necrotic tissue is indicated, else a corneal ulcer follows. In removing bodies from the cornea successfully, it is necessary to paralyze the eye with cocaine. Dr. Fuller always uses one, two or three drops of a six per cent. solution. After removal of the foreign body use hot water every half hour, or hour, for the first day, and drop in three or four drops of a glycerine-tannin solution, ten drops to the ounce of water. If pain or conjunctivitis arises use scopolamine, gr. 1-3 to two drams of water. Rest to eye and cover with smoked glasses.

### Ergot in Typhoid Fever.

On the ground that the fundamental factor in each of the fatal conditions in typhoid fever is insufficient tone of some area or areas of the vital or unstriped muscular fibre which comprises the muscular coat of the blood vessels, lymphatics and alimentary canal, Alfred T. Livingston, Jamestown, N.Y., in *N. Y. M. J. and P. M. J.*, believes that the more thoroughly and promptly this class of tissue is placed upon the highest attainable

plane of tone and so maintained, the less is the likelihood of a fatal issue. He therefore urges the use of ergot hypodermically. The solution of this drug which he has found most satisfactory is made by dissolving one drachm of solid extract of ergot in one ounce of sterilized distilled (cooled) water, and then after filtering the solution adds two minims of chloroform. The dose is one-half to one drachm, which he gives from two to six times per day, or oftener. Some of the more important results obtained are prevention or relief of general nervousness, insomnia or delirium, prevention and relief of headaches and abdominal pains, relief or modification of tympanites and better general action of the bowels, modification of local inflammation, thus lessening likelihood of ulceration, hemorrhage or perforation, reduction of frequency of pulse, and lessening action of heart.

#### **Eneuresis in Children.**

The treatment of this complaint (Percy Lewis, Folkestone, England, in *The British Journal of Children's Diseases*) which has for some years been successfully carried out by the writer, was suggested by the consideration of a similar condition which occurs in infants fed on starchy foods. Such children always pass a larger amount of urine than normal. Their nurses complain that they are always soaking their diapers. When their starchy food is cut off this symptom disappears. It is the same with the victims of eneuresis. In most cases a rigid anti-diabetic diet removes the symptoms in a few days. The cause, however, due to a general depression of health produced by an excessive starchy diet, requires general tonic treatment at the same time. During the cure starchy food may usually be allowed for breakfast without "accidents" occurring during the night. Without any other treatment hospital cases are relieved often at once, and finally cured, by being taken as in-patients and fed on the ordinary hospital diet. In private cases even small quantities of bread or cake, given at dinner or tea early in the treatment, cause the bed wetting to recur. In about three to four weeks, sometimes sooner, if the tonic treatment is finished as well, a normal diet may be given without eneuresis happening.

#### **The Treatment of Puerperal Mastitis.**

Puerperal mastitis, when suppuration has taken place, is usually treated by means of bold incisions into the inflamed area, that thorough drainage of the abscess and infiltrated tissues

may be afforded. Such incisions are made to radiate from the nipple, which organ is naturally spared. The mastitis as a rule readily heals after this operation, and the function of the gland is not impaired to any material extent. The objection to this mode of treatment, however, is that the period of recovery is apt to be long and the scars left by the incisions to be very disfiguring, especially if situated in the upper part of the breast. With a view to hastening the healing process, Boeckel (*Gaz. Med. de Strassbourg*, No. 10, 1901) suggested that after evacuation of the pus, the whole of the inflamed area should be excised by means of two elliptical incisions, and that afterwards the wound should be carefully closed by means of buried and superficial sutures.

This operation, however, is seldom likely to be resorted to, for unless the inflammation were very limited in extent it would involve too great a sacrifice of the gland tissue. A more valuable suggestion as to the best mode of dealing with such abscesses is the following : its originator, Professor Bardenheuer, claiming for it that not only does it favor the rapid healing of the inflammation, but that it avoids the unsightly scars and damage to the milk-ducts, which in the customary operation are the great drawbacks. His method of treatment is as follows: A semi-circular incision is made at the periphery of the lower half of the breast, which is then dissected from the pectoralis major and turned up by sharp retractors, so that its posterior surface is exposed. The abscess is then opened from the posterior surface by free radiating incisions into each abscess cavity, a large drainage tube is inserted, and the breast replaced in its normal position. These drainage tubes running from above downwards, now project beneath the gland, and are most favorably placed for the free escape of the pus.

On account of this excellent drainage, the healing process is shortened, the operation scar is completely covered by the overhanging breast, and the large superficial milk-ducts remain uninjured. In the first few cases which Bardenheuer treated after this fashion the recovery was somewhat delayed by the large operation wound being allowed to granulate, but in subsequent cases he partially closed this by sutures.

Bardenheuer believes that this operation is advisable when concerned with any large abscess situated in the breast tissue, whether superficial or deep. For sub-mammary suppuration, a similar operation has long been in use; for removal of circumscribed innocent mammary tumors this method may

often be adopted with advantage, and was advocated by Dr. Thomas in 1882.—*Birmingham Medical Review.*

#### The Treatment of Flatulence.

Charles D. Aaron, Detroit, Mich., in *Southern Clinic*, says: "The dietetic treatment of flatulence is of primary importance. Foods contain principally 4 of the 82 elements: carbon, hydrogen, oxygen and nitrogen. Carbon, hydrogen and oxygen are found in the fats; nitrogen in the proteids. Fermentation of the carbohydrates and fats occurs in the stomach or upper part of the small intestine; the proteids undergo putrefaction in the lower bowel, the extent of which can be measured by the amount of indican in the urine. If we have fermentation, get foods upon which the bacteria cannot exist; we thus starve them out. If we have putrefaction, forbid proteids. The substances which excite fermentation are beer, champagne, kumys, starches, sugar, vegetables rich in cellulose, cabbage, potatoes, beets, peas, beans, rye bread, fresh bread, cakes and fatty foods. Artificial and natural mineral waters are to be forbidden. In many people a milk diet will produce flatulence. The drugs usually used to aid the expulsion of gas are the carminatives, which stimulate gastric and intestinal movements. It being absolutely necessary to get normal evacuations of the bowels, Dr. Aaron has found nothing better than chemically pure oleum petrodatum. This is colorless, odorless and tasteless, and can be given in tablespoonful doses four times daily. After mentioning cold water injections, turpentine, stomach tube, massage of abdomen, electricity, the author states that the use of a cannon ball from two to five pounds on the abdomen has been found very valuable in these cases. It should be rolled over the large intestine every night for five minutes and continued for some time."

#### Lumbago.

Capitan recommends in *Presse medicale*, for March 9th, 1904, an intramuscular injection in the painful area of the following:

- R. Antipyrine.....5 grammes ("5 grains").  
Cocaine hydrochloride ..... 30 centigrammes (4½ grains).  
Distilled water, a sufficient quantity to make  
10 grammes (½ ounce).

M. Inject 2 grammes.

—*N.Y.M.J. and P.M.J.*

The following combinations are recommended by L. Webster Fox, in *Med. Bull.*, in the treatment of diseases of the eye:

**Edema of the Lids.**

R. Liq. plumbi subacet. dil.	... . . . .	5ii.
Tinct. opii		
Tinct. belladonnæ, ää	.....	5iss.
Tinct. arnicæ	.....	5i.
Aqua camphora		
Aq. destil., ää, q. s. ad.	.....	5iv.

M. Sig.: To be applied locally.

(It seems from the ingredients included that great care should be employed in using the foregoing combination.)

**Conjunctivitis.**

R. Acidi borici		
Sodii biboratis, ää	.....	5ss.
Aq. menth. pip.	.....	5iii.
Ext. hamamel. dest.	.....	5iv.
Aq. camphora		
Aq. destil., ää	.....	5ii.

M. Sig.: Bathe the eyes freely.

**Ophthalmia Neonatorum.**

R. Hydrastin hydrochlor	.....	gr. iv-vi.
Acidi borici	.....	gr. xx.
Tinct. opii deod	.....	5ii.
Aquæ destil	.....	5iv.

M. Sig.: As an eye lotion.

**Ulcers of the Cornea Following Purulent Conjunctivitis.**

R. Eserin. sulph.	.....	gr. $\frac{1}{4}$ .
Hydrg. oxid. flav.	.....	gr. $\frac{1}{8}$ .
Liq. petrolati	.....	5i.

M. Sig.: A small amount to be placed in the eye once or twice daily, followed by a light massage of the lid.—J. A. M. A.

## The Physician's Library

The following will shortly be issued from W. B. Saunders & Co., Philadelphia:—

*Nothnagel's Practice of Medicine:*

—*Tuberculosis and Acute General Miliary Tuberculosis.* By DR. G. CORNET, of Berlin. Edited, with additions, by WALTER B. JAMES, M.D., of the College of Physicians and Surgeons, New York. Handsome octavo of 806 pages. Cloth, \$5.00 net; half morocco, \$6.00 net.

—*Diseases of the Intestines and Peritonum.* By DR. HERMANN NOTHNAGEL, of Vienna. Edited, with additions, by HUMPHREY D. ROLLESTON, M.D., F.R.C.P., of St. George's Hospital, London. Octavo volume of 1032 pages, containing 20 insert plates. Cloth, \$5.00 net; half morocco, \$6.00 net.

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*Diseases of the Liver.* By HUMPHREY D. ROLLESTON, M.D., F.R.C.P., of St. George's Hospital, London. Octavo volume of about 1,000 pages, beautifully illustrated, including a number of colored plates.

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- A Text-Book of Materia Medica: Including Laboratory Exercises in the Histologic and Chemic Examination of Drugs.* By ROBERT A. HATCHER, Ph.G., M.D., of Cornell University Medical School, New York City; and TORALD SOLL-MANN, of the Western Reserve University, Cleveland, O. 12mo volume of about 300 pages. Bound in flexible leather.
- Examination of the Urine.* By G. A. DE SANTOS SAXE. Pathologist to Columbus Hospital, New York City. 12mo volume of about 300 pages, fully illustrated. Bound in flexible leather.
- Obstetrics and Gynecologic Nursing.* By EDWARD P. DAVIS, A.M., M.D., of the Jefferson Medical College, Philadelphia. Second edition, revised and enlarged. 12mo of 400 pages, fully illustrated. Bound in buckram.
- The Practical Application of the Roentgen Rays in Therapeutics and Diagnosis.* By WILLIAM ALLEN PUSEY, A.M., M.D., of the University of Illinois; and EUGENE W. CALDWELL, B.S., of the Edward N. Gibbs Memorial X-Ray Laboratory of the University and Bellevue Hospital Medical College, New York City. Second edition, revised and enlarged. Octavo volume of about 625 pages, with nearly 200 illustrations, some in colors.
- A Text-Book of Mechano-Therapy (Massage and Medical Gymnastics).* By AXEL V. GRAFSTROM, B.Sc., M.D., late of City Hospital, Blackwell's Island, N.Y. Second edition, greatly enlarged and entirely reset. 12mo of 200 pages, fully illustrated.
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*Medical Laboratory Methods and Tests.* By HERBERT FRENCH, M.A., M.D.(Oxon.), M.R.C.P.(Lond.), Medical Registrar, Guy's Hospital; Gielson Scholar, Society of Apothecaries of London; Radcliffe Travelling Fellow, Oxford University. Price, \$1.00. London: Bailliere, Tindall & Cox. Canadian Agents: J. A. Carveth & Co., Yonge Street, Toronto.

This small volume fills a long-felt want in that it is a handy book dealing with the chemical and microscopic tests most useful to the medical man. The commoner methods in use are set forth in detail, with the conclusions drawn from the various tests, stress being laid on the fallacies to which each test is liable. The author has simply intended the book for easy reference in the medical laboratory.

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*Manual of Materia Medica and Pharmacy.* Specially designed for the use of Practitioners and Medical, Pharmaceutical, Dental, and Veterinary Students. By E. STANTON MUIR, Ph.G., V.M.D. Instructor in Comparative Materia Medica and Pharmacy in the University of Pennsylvania. Third edition, revised and enlarged. Crown octavo, 192 pages, interleaved throughout. Bound in extra cloth, \$2.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The first edition of this "Manual of Materia Medica and Pharmacy" appeared eight years ago, and a second some four years later. Every alternate leaf is blank for use in making notes or entering formulae. It has this value attached to it, which is of more particular importance to country practitioners, that is, dosage is given for horses, cattle, dogs, and cats, as well as for human beings. A splendid chapter on Pharmacy enhances the worth of the volume.

*The Bacteriology of Every-day Practice.* By J. ODERY SYMES, M.D., D.P.H. Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden, London. Canadian Agents: J. A. Carveth & Co., Toronto.

It may safely be said there are few things in medical literature which appeal so much to the average practitioner as a well-written monograph—a handy little volume to be slipped into the pocket for perusal in odd moments. Such a work is "The Bacteriology of Every-day Practice." The same average practitioner often finds it inconvenient to wade through considerable literature, to refresh his memory on some little detail of bacteriological technique. This work is not a primer, but a busy man's monograph, very well written, and, of course, quite up-to-date, and we can therefore highly recommend it.

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*Lea's Medical Epitome Series.—Anatomy.* A Manual for Students and Practitioners. By HENRY E. HALE, A.M., M.D., Instructor in Surgery and Anesthetist and Instructor in Anesthesia at the New York Polyclinic Medical School and Hospital; Deputy Genito-Urinary Surgeon to the Out-Patient Department of the New York Hospital; Physician in Charge, St. Chrysostom's Dispensary; Anesthetist to the Roosevelt Hospital (First Surgical Division). Illustrated with 71 engravings. Lea Brothers & Co., Philadelphia and New York.

This handy volume presents in a clear, concise manner something more than the mere essentials of anatomy. It is a splendid hand-book for students to review just prior to examinations.

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*Tuley's Epitome of Pediatrics.* A Manual for Students and Practitioners. By HENRY ENOS TULEY, A.B., M.D., Professor of Obstetrics in the Medical Department of Kentucky University, Louisville, Ky. In one 12mo volume of 266 pages, with 33 engravings. Cloth, \$1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1903.

Much has been said pro and con regarding epitomization, but the resultant fact remains that when well done it is highly useful. Professor Tuley's compact work justifies this statement. He considers the whole subject of Pediatrics from the

moment of birth to adolescence, including the anatomy, development, care and examination of infants, the therapeutics peculiar to that age, and the feeding of infants and older children, in full detail. He then covers the various diseases systematically and clearly with the necessary directions and prescriptions. This little work may readily be carried in the pocket and consulted at times when larger volumes are inaccessible. In this way the physician may refresh his knowledge and gain practical points when needed. For the benefit of the student, questions are appended at the ends of the chapters, so that he may test his own knowledge. The volume is a fitting representative of the excellent "Medical Epitome Series."

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*Squint Occurring in Children.* An Essay by EDGAR A.

BROWNE, F.R.C.S., Ed., Lecturer on Ophthalmology, University Liverpool. Assisted by EDGAR STEVENSON, M.D., M.Ch. Aberd., Demonstrator of Ophthalmology, University Liverpool. London: Balliere, Tindall & Cox. Canadian Agents: J. A. Carveth & Co., Yonge Street, Toronto.

This is a small book of seventy-four pages, and the price is 75 cents net. It represents the teaching of the author-in-chief for some years past. It deals only with the concomitant divergent squint of childhood, and is an account of squint reduced to its simplest expression. An entire chapter is devoted to treatment.

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And Ontario Medical Journal

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## THE ONTARIO MEDICAL ASSOCIATION.

A reference to the preliminary programme, on other pages of this issue, of the coming annual meeting of the Ontario Medical Association, to be held in this city on the 14th, 15th, and 16th of June, under the presidency of Dr. J. F. W. Ross, will convince any one that there is every promise of a splendid meeting. Dr. Macdonald, as chairman of the Committee on Papers and Business, has been able to get together a very attractive programme; whilst his confrere, Dr. Baines, as Chairman of the Committee of Arrangements, is quite at home in fulfilling his part of the proceedings. Though the latter has not shown his hand to us, it is safe to promise that there will be a good time forthcoming. Toronto with a medical population of 450

should easily turn out 200 alone, and the balance of the province with a population of 2,000 should at least contribute 10 per cent. June is not a very busy month; and the fact that there has been inaugurated a post-graduate course by the Medical Faculty of the University of Toronto, to commence about the same time, should be an additional incentive to make the attendance better and larger than ever before. The growth in the annual meetings of all our medical societies has within the last few years greatly advanced. This is a sign of the times, and is evidence that the medical man appreciates now more than in former years the advantages of commingling more with his fellows. No man who attends any of these meetings can go home without feeling that he has done himself a great deal of good. He owes it to himself, his confreres, and his patients, that he gets out at least once a year and see what is going on in the world of medicine. The narrow spirit which keeps him at home, fearful that a fellow may profit by his absence, should have no place in the profession of medicine. The sympathies of that profession are too broad and generous for the harboring of selfishness. We urge upon the practitioners to come out and support the Ontario Medical Association, and we are satisfied in saying that the members of the profession from any of the other provinces would be thrice welcome. There seems to be no reason why we should not participate in one another's gatherings.

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#### CANADIAN MEDICAL ASSOCIATION.

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As already announced in these columns, the Thirty-Seventh Annual Meeting of the Canadian Medical Association will be held in Vancouver from the 23rd to the 26th of August. Those who contemplate attending this meeting should put themselves in communication with the General Secretary, Dr. George Elliott, 120 John Street, Toronto, without further delay, as it

is imperative that all delegates present a certificate to the railway ticket agents from the General Secretary certifying to their membership or that they are delegates to this convention, if they desire to take advantage of the reduced rates. The return fare can be readily ascertained from any ticket agent, and this fare will be single first-class rate to Chicago, plus \$50, from all points east of Port Arthur. From all points in Ontario and Quebec tickets will be on sale from August 15th to 21st, inclusive, and from points east of Vanceboro, Maine, August 14th to 20th inclusive, final return limit being October 23rd, which means that delegates must reach home that day. Tickets will be issued good going via Canadian Pacific Railway, via Port Arthur, or via Sault St. Marie, St. Paul, thence Soo-Pacific route, Great Northern and Northern Pacific Railways; returning same route or any of the above routes. It is also proposed to allow variation via St. Louis from St. Paul and Chicago on return trip on payment of \$10 additional. Stop-overs will be granted west of Port Arthur on going and returning journey and west of St. Paul when tickets are routed on return journey by that point. Those who wish on return journey to visit the Yellowstone Park can do so on payment of the extra charge made for the trip through the Park from the junction with the Northern Pacific Railway at Livingstone. The arrangements as to rates in Manitoba, Northwest Territories and British Columbia are as follows:—From Port Arthur, Fort William, Rat Portage, \$50; from Winnipeg, Emerson, Gretna, Portage La Prairie, Brandon, Indian Head, \$45. From points in the Northwest Territories, Qu'Appelle and west, round trip tickets to Vancouver and Victoria, B.C., will be issued at single fare. These rates cover the transportation of delegates and immediate members of their families. Passengers ticketed at stations Medicine Hat and east have the option of going via the main line and return Crow's Nest, or *vice versa*, when purchasing tickets. Already a fine list of papers has been promised, and there is every indication that this meeting will be one of the most successful in the history of the Association. It is not likely that there will be any special train.

### EXTRACTS FROM THE MOSELEY EDUCATIONAL COMMISSION.

As Mr. Moseley and Professor Rose Bradford, two of the members of the Moseley Commission, visited Toronto and Montreal last fall, some extracts from the report of this commission as it affects medical teaching in Canada may prove interesting reading. In the report, Dr. W. H. Gaskell deals with the teaching of anatomy and physiology. In Canada the medical schools visited were at Toronto, Montreal, and Quebec; in the United States, New York, Philadelphia, Baltimore, Chicago, Ann Arbor, Boston, and Ithaca. "The schools in question were those in connection with the universities in the above-mentioned cities. The hospitals in most of these cities were only indirectly associated with the medical departments of the universities and their clinical facilities were not exclusively employed for the instruction of the students of a single university or school. In some cities, however, as in Baltimore and Montreal, one hospital is entirely devoted to the needs of a single medical school—namely the Johns Hopkins at the former and the Royal Victoria Hospital at the latter."

"The system of student clerks and dressers scarcely exists in the United States except at the Johns Hopkins Hospital, though it is in full operation in Canada."

Professor Rose Bradford summarizes the first portion of his report as follows:

"These two points—on the one hand the limit of service of the visiting and teaching staff, and on the other the absence of the clerk and dresser system—were those which most impressed an English teacher as indicating the main points of difference in the relations of the hospitals to the teaching medical schools. Many of the American teachers are alive to the advantages of the clerk and dresser system, but they point out that under their system, the students get the practical acquaintance with diseases subsequently during their period of office as 'internes,' at a time, moreover, when they are more fully capable of making use of the opportunities afforded them. In the English system, the student becomes a clerk or dresser at a period in his career when he knows little or nothing of medicine or surgery, and thus they argue that the great opportunities afforded him are to a considerable extent wasted. With their system the 'interne' has already graduated, and has acquired a knowledge of medi-

cine and surgery which should enable him to make full use of his opportunities. The great and obvious disadvantage of the American system is that all students cannot possibly become 'internes,' and thus a number of men must start in practice without the advantages that the daily life in the ward in contact with disease imparts."

As Professor Bradford states, this is the striking difference between the system of medical education in vogue in the United States and that followed in this country—meaning England—and also in Canada.

According to Dr. Gaskell's report, the anatomical and physiological laboratories are far ahead on this side of the Atlantic, those of Toronto and Johns Hopkins in particular, especially as regards the system of physiological units, and these impressed him very much.

Some of the summarized conclusions of Dr. Gaskell are as follows:

"In our medical and scientific schools separate laboratories with a separate staff of teachers ought to be provided for anatomy, histology, physiology, physiological chemistry, experimental psychology, and perhaps neurology."

He states that he is not convinced that didactic lectures are a mistake; and advocates a six or seven years' conjoint course for the academic and medical degree. Concluding, he states that there is much to be said in favor of taking into account the work done by the student during the term, in his examination.

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#### MARMOREK'S ANTI-TUBERCULOUS SERUM.

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The fact that Dr. Marmorek may pay a visit to Canada during the coming summer; that he may possibly be induced to make a presentation before the approaching annual meeting of the Canadian Medical Association at Vancouver; that his serum has been tried in Montreal and is at the present time being experimented with in that city by Dr. Richer, renews interest in this subject throughout Canada. In *The Lancet* of the 9th of April, Dr. Arthur Latham publishes his observations on selected cases at St. George's Hospital and at the Brompton Hospital for Consumptives. These observations have import-

ance lent to them from the fact that Professor Marmorek came over from Paris to London on three separate occasions, so that Dr. Latham had the benefit of his personal advice. At the commencement of the experiments in December last, Dr. Marmorek stipulated that the serum should only be given to "severe or to urgent examples of the disease." Upon thirty severe cases were the experiments conducted, extending over a period of three months. It is therefore interesting and important to record some facts and observations as regards the necessary technique, the dosage and action of the serum, and the complications which sometimes occur. The method of injection, the sites, the preparation of same and subsequent treatment of the injection point are practically the same as for anti-toxin or streptolytic serum. In these selected cases, the injections amounted to over 450 in number. Dr. Marmorek prefers to give the serum between 9 and 11 in the morning. In chronic cases the doses given were 10 c.c. every day for two, seven, eight or nine days; then an interval of a week or ten days. At the end of that time 5 c.c. for two days and 6 c.c. for further two days. Another week or ten days would elapse and a third series similar to second, and so on. These were found to be too large, and at the latter end of the treatment 5 c.c. for four days and three days' rest; after the third series an intermission of two weeks. The main point to watch, apparently, is the capacity of the individual to support the serum. In acute cases, in meningeal tuberculosis, and in surgical cases, doses up to 30 c.c. may be given for four days without harm. The serum effects are seen in rise of temperature, a cumulative action, the ordinary serum rashes—urticaria, erythema and scarlatiniform eruptions being most common. After eight or nine injections, "pins and needles" in the limbs, followed by neuralgic pains, and edema at site of injection. In some instances after injection the patients became drowsy and listless.

Dr. Latham sums up and states: "As a result of my experience of this new treatment up to the present time, I think I may say that the serum when given in carefully graduated doses, with proper precautions and in suitable cases, does no harm. Further, my experience tends to show that the serum does produce a specific antitoxic effect. In any case, there can be no doubt that an extended trial of this remedy should be made, more especially in less severe cases than those to which I have hitherto confined my attention. It must not, however, be forgotten that great care must be exercised in the adminis-

tration of this remedy, and that the treatment may have to be extended over a considerable time before permanent results are obtained."

All we can say in this connection is to express the hope that the serum may prove valuable, and it would be especially of great moment if there would be evolved a cure for that form of tuberculosis which is now practically always fatal—tubercular meningitis.

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### THE "PATENT MEDICINE" CURSE.

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Written below the above title there is a remarkably interesting article from the pen of a layman in the May number of *The Ladies' Home Journal*, which, with its gigantic circulation of over a million copies, and ten thousand additional for this issue, will strike a blow right over the solar plexus of the patent medicine traffic. It is especially interesting at this time because we understand that a certain patent medicine house of wide notoriety has issued a writ against the above journal, claiming one or two hundred thousand dollars for damages. It is most scathing in its denunciation of alcohol by the patent medicine route, not to mention the exceeding great dangers from the cocaine and morphine ingredients these hundreds of nostrums on the market contain. It is a sign of the times that the people are awakening to the awful dangers of self-prescribing of drugs; and it is no doubt due to the persistent onslaught which has been waged by the virile pens of *American-Medicine* and the other medical journals without exception, against this wide-spread evil. It will be interesting to watch the course of events to see which will be the great periodical circulating freely amongst the people of Canada to first step out and cut out these obnoxious ads. from their columns.

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### MUNICIPAL COMPENSATION IN QUARANTINABLE CASES.

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Is it a just law which puts a man to expense and inconvenience because his child has been unfortunate enough to contract scarlet fever or diphtheria at school or otherwise? His house

is placarded, he is driven from his home and sick one, and is forced to find board and lodging elsewhere, for which he must pay himself, in order that the balance of the community may be protected. It is surely no fault of his that disease of this character appears amongst the members of his household, and why should he individually be asked to protect other members of the community at his own expense? Surely it would be just and right for the community to pay for protecting themselves; and whatever money the man who is driven forth from his home has to expend, should be returned by the law and the people who put him to any such expenditure.

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### HAS CANCER RESEARCH FAILED?

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So far as the State of New York is concerned, cancer research has failed to establish the cause of cancer up to the present time, and for the immediate future there is to be no more of it, state-aided. The Legislature of the State of New York has refused to vote the usual annual appropriation of \$100,000 to the laboratory at Buffalo, on the ground that there has been nothing gained by the expenditure of these large sums of money.

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### Editorial Notes

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#### UNIVERSITY OF TORONTO FACULTY OF MEDICNE.

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I am instructed to inform you that it is the intention of the Faculty of Medicine to conduct a Post-graduate Course extending over the two weeks immediately preceding the meeting of the Ontario Medical Association. The programme from day to day will be as follows:

9 a.m. to 11 a.m.—Operations and Surgical Clinics in the various Hospitals. 11 a.m. to 1 p.m.—Clinical Laboratory Methods and Practice in the Laboratories of the University of Toronto. 2 p.m. to 4 p.m.—Medical Clinics in the various Hospitals.

A fee of \$10 will be charged for the Clinical Laboratory work.

The details of the time-table will be printed in due course and will be distributed at the Secretary's office in the University on the first day of the course.

It is requested that members of the profession who wish to take this course should notify the Secretary before coming to Toronto.

The course will begin on Wednesday, June 1st, and will terminate on June 15th.

A. PRIMROSE,  
*Secretary.*

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#### WHEN YOUR CASE IS WEAK ABUSE THE OTHER SIDE.

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This maxim has been a favorite standby with the legal profession from time immemorial and unfortunately certain pharmaceutical manufacturers have recently seen fit to make use of that maxim. This is particularly true of the manufacturers of a certain iron preparation.

The impudence and effrontery with which these people try to hoodwink the medical profession is rather remarkable.

No other preparation ever came before the medical practitioner with so little details as to methods of preparation, composition, therapeutic effect, etc., etc., and nevertheless the profession is asked to accept the wildest and most extravagant statements as to its wonder-working capabilities. This is not all. The makers of this preparation, in seeking the support of the profession, covertly attack and sling mud at all other iron preparations that have been before the profession for years. They single out Pepto-Mangan, a combination which has stood the tests of the leaders in the scientific medical world both here and abroad, an organic iron combination in which, in its results, the general practitioner and the hospital clinician have learned from experience to place implicit confidence.

This unbusiness-like method of attempting to cast discredit upon other reliable and thoroughly tested combinations we cannot term otherwise than despicable, and furthermore, we know our readers cannot be influenced by unsupported statements of financially interested parties, but will always bear in mind that Gude's Pepto-Mangan was submitted to the profes-

sion as an organic iron product, and the results obtained by its use, as also the scrutiny of analysis by chemists of repute, substantiate all that has ever been claimed for it.

Attempting to foist upon the attention of the physician a product simply by insinuation that known articles are inferior, is a manner of doing business which should receive the stamp of disapproval by every one of our profession.

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## NEWS ITEMS

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DR. JAMES BELL has returned to Montreal from Europe.

DR. LORNE STAUFFER has removed from Millbank to New Dundee.

DR. MOORE, late of Moorfield, has moved to Carthage and opened up an office.

DR. MOORE, who for many years was a resident of Clinton, died recently in California.

THE WESTERN HOSPITAL, MONTREAL, needs a new wing, and funds are being solicited for the purpose.

DR. W. T. CONNELL, of Kingston, has been appointed Assistant Bacteriologist to the Ontario Board of Health.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.—Have you joined this worthy organization? If not, why not?

A NEW by-law on vital statistics for the better provision for the registration of births has been adopted in Montreal.

DR. JOHN L. DAVISON, Toronto, Professor of Clinical Medicine in the University of Toronto, has gone to England.

DR. J. T. HALSEY, Lecturer in Pathology at McGill University, will sever his connection with that institution shortly.

DR. JAMES F. W. ROSS, President Ontario Medical Association, has returned to Toronto from a three months' trip to Egypt.

ORGANIZED labor in Victoria, B.C., has donated \$150 towards the furnishing of a room in the Stratheona wing in the Jubilee Hospital.

DR. R. R. ROGER, of Russell, Man., has for the past five months been in the Old Land, visiting the hospitals of London, Edinburgh and Glasgow in the interests of his profession.

A SANITARIUM for consumptives was opened at Kentville, N.B., on May 1st. The building occupies a beautiful site on the north bank of the Cornwallis River, and overlooks the town of Kentville.

A NEW ASYLUM PHYSICIAN FOR ONTARIO.—The Provincial Secretary's Department is considering the appointment of a general assistant physician for the various asylums of the province to act as a relieving officer.

THE Toronto Isolation Hospital recently opened a new wing for the accommodation of 100 patients. It was erected at a cost of \$32,000. The ceremony was performed by Ald. Dr. W. T. Harrison, chairman of the local Board of Health.

CANADIAN DOCTORS IN NEW YORK.—The following Canadian doctors recently visited New York: Dr. E. Haanel, Ottawa; Dr. J. A. Temple, Toronto; Dr. Allen Baines, Toronto; Dr. W. H. B. Aikins, Toronto; Dr. E. Farrell, Halifax.

DR. D. A. SINCLAIR, who received his primary education at the Glencoe High School, has recently returned from England, where he has been taking a post-graduate course at a hospital in London, and will locate at Melbourne, his birthplace.

KINGSTON'S College of Physicians and Surgeons is to be reorganized, with the Hon. Dr. Sullivan as President. The intention is to grant fellowships, viz., F.R.C.P.S., to doctors of five years' standing upon examination and an approved thesis.

DR. J. P. CHARTRAND, Montreal, Professor of Surgery at Laval University, died suddenly on the morning of the 26th of April, aged forty-two years. He had been attached to the staff of Laval for six years, and received his medical training at Victoria University.

DR. A. W. HOTHAM, St. Marys, has sold out his medical practice to Dr. A. A. Knox. Dr. Hotham has left for Waskada, Southern Manitoba, where he will take up practice.

McGILL PROFESSOR HONORED BY HIS CLASS.—At the close of the session of 1903-1904 at McGill, Dr. George Wilkins, Professor of Medical Jurisprudence at McGill, was presented with a handsome illuminated address inscribed in Chinese characters.

A METHODIST HOSPITAL FOR TORONTO.—*The Christian Guardian*, recently advocated editorially the establishment in Toronto of a Methodist hospital. Under the will of the late Hart A. Massey, \$100,000 was left for this purpose, on condition that a similar amount should be subscribed.

DR. W. T. HAMILTON, of Stratford, formerly of Motherwell, has returned from the Old Country. He was absent fifteen months, during which time he spent one year in London, Eng., attending the Royal College of Physicians, from which he graduated, obtaining the degrees of M.R.C.S. and L.R.C.P.

PROVINCIAL APPOINTMENTS.—Dr. W. P. Chamberlain has been appointed associate coroner for Toronto; Dr. N. J. Amyot, Belle River, associate coroner for Essex County, to succeed Dr. J. O. Reaume; Dr. J. H. Bull, Holland Centre, associate coroner for Grey County; Dr. C. P. McPherson, Prescott, associate coroner for Leeds and Grenville.

NEWS was received by cable from London that Dr. Breffney Ralph O'Reilly, son of Dr. Chas. O'Reilly, of the Toronto General Hospital, has successfully passed the examinations in medicine and surgery, entitling him to the honorable degrees of L.R.C.P. (Lond.) (Licentiate Royal College Physicians, London), and M.R.C.S. (Eng.) (Member Royal College Surgeons, England). Dr. O'Reilly was born in Toronto, educated at Upper Canada College, and took his degree of M.D.C.M. in Trinity University, when he won the gold medal. He is probably one of the youngest holders of his various degrees.

CANADIAN MEDICAL ASSOCIATION.—It is understood that the coming 37th annual meeting of the Canadian Medical Association gives promise of equalling, if not eclipsing, any of the previous meetings yet held, both in point of attendance and character of papers. So far as entertainment is concerned—well, don't miss the meeting in the Pacific province!

APPOINTMENT AT QUEEN'S.—Dr. Frederick Etherington, of Kingston, has been appointed by Queen's Medical Faculty to the newly-inaugurated tutorship in human and comparative anatomy. Dr. Etherington is now at Edinburgh, pursuing his medical studies, but will return in the autumn and henceforth devote all his time to the position to which he has been appointed.

APPOINTMENTS AT QUEEN'S.—The following appointments have been approved by the Trustees of Queen's University to the staff of the Medical Faculty. To be Professor of Pediatrics and Associate Professor of Obstetrics and Gynecology, Dr. Wood; to be Assistant Professor of Anatomy, Dr. Mylkes; to be Professor of Medical Jurisprudence and Toxicology, Dr. Williamson.

CONSUMPTION SANITARIA FOR THE PROVINCES.—A deputation recently waited on Sir Wilfrid Laurier from the Association for the Prevention of Tuberculosis, asking aid for the establishment of a sanitarium in each of the provinces of the Dominion. Sir Wilfrid will consult with the Minister of Justice to see whether the Dominion can legally grant aid to such institutions.

MEDICAL APPOINTMENTS AT THE UNIVERSITY OF TORONTO.—The Ontario Cabinet has approved of the following appointments: H. S. Hutchinson, M.B., and W. M. Meldrum, M.S., assistants in the chemical laboratory of Toronto University; R. H. Mullen, M.B., Assistant Demonstrator in Pathology; F. W. Marlow, M.D., F.R.C.S.(Eng.), Assistant Demonstrator of Anatomy.

TORONTO CLINICAL SOCIETY.—The following officers have been elected to the Toronto Clinical Society for 1904-1905: President, Dr. Herbert J. Hamilton; Vice-President, Dr. Adam H. Wright; Corresponding Secretary, Dr. W. J. McCollum; Recording Secretary, Dr. George Elliott; Treasurer, Dr. Geoffrey Boyd; Executive, Drs. H. B. Anderson, H. A. Bruce, D. Gibb Wishart, W. H. B. Aikins and John T. Fotheringham.

**NEW PROFESSOR OF GYNECOLOGY AT LAVAL.**—Dr. L. deL. Harwood, of Montreal, has been appointed to succeed the late Dr. Brennan as Professor of Gynecology at Laval University, and will also be chief of the gynecological clinic in Notre Dame Hospital. Dr. Harwood has also been chosen President of the Section on Gynecology of the Medical Congress of the French-speaking Physicians of North America, which is to meet in Montreal this year.

**CANADIAN MEDICAL ASSOCIATION.**—Do not forget the dates of the coming annual meeting at Vancouver on the 23rd, 24th, 25th, and 26th of August. British Columbia is anticipating a large crowd, and should be nobly supported by the eastern provinces. In order to take advantage of the reduced rates, those who contemplate going out should get into communication with the General Secretary, as they will require a special certificate signed by that official before purchasing their transportation. This is imperative.

**ST. JOHN, N.B., PUBLIC HOSPITAL.**—In 1903, 982 patients were treated in this hospital, there being 379 medical cases, 480 surgical, and 114 eye and ear cases. Of these patients, 408 were discharged cured, 307 were discharged as improved, 24 by request, 1 because of being disorderly, 28 unimproved, 75 died, and 48 remained in the institution at the end of the year. The out-door departments showed, medical and surgical cases, 373; eye and ear, 227.

**QUEBEC MEDICAL LAW DEFECTIVE.**—A good deal of interest has been evoked amongst the medical fraternity of Montreal over the appearance in the legislature of that province of a bill having for its purpose the making of doctors out of students who have failed to obtain a certificate of admission to practice. The proposed legislation affects some two hundred medical students of the Province of Quebec, and proposes to admit without the necessary matriculation examination all those who began the study of medicine prior to September of last year.

**THREE GENERATIONS OF PHYSICIANS.**—A remarkable photo is at present on view in the window of Messrs. Wm. Notman & Sons, representing three generations of medical men in the Church family, including eleven names, and, with one exception, graduates of McGill University. It is of unique interest in view of the fact that its graduation dates include almost the

entire life history of McGill University, beginning with the name of Dr. Peter Howard Church, 1845, and ending with the names of the two most recent graduates in 1896. The design is artistically carried out, and includes reprints of the three buildings occupied by the medical faculty since its foundation, with dates complete.

**TORONTO CLINICAL SOCIETY'S ANNUAL BANQUET.**—Fellows of the Toronto Clinical Society to the number of forty, sat down to the annual banquet in the Albany Club on the evening of the 7th of May. In the absence of the President, Dr. H. J. Hamilton, Vice-President, filled the chair in a very happy manner. A pleasing feature of the evening was the hearty and cordial manner in which the toast to the health of the President, Dr. Fotheringham, was received. This was proposed by Dr. Temple, and replied to by Dr. Hamilton, Dr. Fotheringham being on the ocean on his way to England, convalescing after a very severe attack of septicemia. Altogether it was one of the most enjoyable dinners in the history of the Society.

**DR. WILSON BANQUETED.**—The medical profession of the County of Elgin entertained Hon. J. H. Wilson to a banquet at St. Thomas on Friday, April 8th. There was a large attendance of the physicians of the city and county. Dr. Cascadden, of Dutton, presided, and in proposing the health of the guest of the evening, said that Dr. Wilson came of a fighting stock. Dr. Wilson, however, had passed that stage and had passed into the serene and quieter atmosphere of the Senate. In tendering him this honor, the greatest that could be conferred, the Government acted wisely. His long experience in public life had made Senator Wilson intimately acquainted with the country. He would, he said, not be surprised if Senator Wilson received further honors, and hoped to see him appointed Minister of Health and Sanitation. He had known the Senator for forty years, and they always had the most harmonious relations personally and professionally. Senator Wilson, in replying, said he could not find words to express his feelings. It was a question with him whether the position was an elevation to him or not, as he felt no greater honor than working side by side with his medical brothers. There were no harder workers, or men who made themselves less conspicuous, than the medical profession. He could look back for thirty-three years, when he fought the battles of the profession in the local legislature, and assisted in carrying a bill for the higher standing of the profession, and

all were benefited thereby. After referring at some length to matters pertaining to the profession, the Senator said he asked for forgiveness if he had ever thoughtlessly injured any one's feelings. Remaining in the ranks of the medical profession was a greater honor than being a Senator. Had he stuck to the ranks and kept out of politics he would have been worth thousands of dollars, but he had no regrets for the course he had pursued. Among the other speakers who eulogized the new Senator, both as a public man and as a physician, were Dr. Kains, Dr. Luton, Dr. Guest, Dr. Sinclair and Dr. Marlatt.

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## Correspondence

### MUNICIPAL SANITARIUM—TORONTO NEEDS ONE.

*To the Editor of DOMINION MEDICAL MONTHLY:*

Sir,—I have been frequently asked this question: Is there need of a municipal sanitarium exclusively for our citizens suffering from consumption? Unhesitatingly, I answer, Yes!

The sanitarium at Muskoka is only for cases in the early stages of the disease, and is open to patients from all parts of the Dominion, and therefore has only limited room for Toronto, and, secondly, it is too far away to attract our consumptives in any considerable numbers, and thus inadequate to meet the needs of this city.

The so-called Toronto Free Hospital for Consumptives in the advanced stages of the disease (near Weston), and open to all Canadians, is no doubt an attractive card for securing subscriptions from all parts of the Dominion.

In this city there are continuously at least 600 persons in the advanced stages of the disease, in this province about 5,000, and in the Dominion not less than 15,000.

Now, it is reasonable to believe that from the extensive advertising that is being done at least 5 per cent. of these 15,000 may direct their faces towards this city, and that upon their arrival at said hospital will find the fifty to one hundred beds all occupied, and realize that they are within a ten-cent car fare of the great city whose name had been used to attract them.

Thus year after year consumptives from all parts of the

Dominion will be dumped into this city and become an intolerable nuisance, instead of being cared for in a sanitarium in their own county municipality.

In 1897 a meeting was held at Calgary, Alberta, to take steps to inform the citizens of the Dominion that the Territory of Alberta was a favored place for consumptives. The news spread and many consumptives turned their faces towards Alberta.

Dr. Lafferty, of Calgary, who had favored this movement, in addressing the Canadian Medical Association at Winnipeg in 1901, warned the medical men of the East not to send their consumptives to Alberta, as there was no sanitarium accommodation, that the hospitals, hotels and boarding-houses would not take them in, and that their condition was deplorable.

This, together with the experience of Colorado, California, and other states, should be warning enough to our citizens.

The burning question in Toronto to-day is, Shall our citizens contribute \$25,000 so as to take advantage of the \$50,000 voted by the ratepayers and of the Government aid of \$4,000 for land and buildings and \$1.50 a week for each patient, and establish a municipal sanitarium under the act exclusively for our citizens suffering from consumption, or shall the city become the dumping place of the whole Dominion for advanced cases of this disease?

April 18, 1904.

E. J. BARRICK.

## Special Selection

### THE SOLUBLE FERMENTS OF COW'S MILK.

BY JOSEPH LESPERANCE, M.D. (PARIS), MONTREAL, QUE.

It is a well-known fact that milk is in itself a complete food, since it contains the three alimentary elements by which all life is sustained, namely, the albuminoids, the fats, and the sugars. But, although human life may be indefinitely maintained by the exclusive use of milk, the seemingly paradoxical fact has been established that an artificial mixture of albumins, fats, and sugars, although in the same proportions as when contained in natural milk, will not sustain life beyond a limited period. The following experiment made by Lunin demonstrates this interesting fact:

Mice, as well as men, can live indefinitely on natural milk as a sole diet. But when they are fed on artificial milk containing all the chemical constituents of an excellent milk, they die in from twenty to thirty days. In this experiment Lunin prepared his milk in the following manner: The milk was diluted with water, and then precipitated in acetic acid. The flaky precipitate was then washed with acidulated water, leaving it a mixture solely of casein and fat. To this quantity of albuminoid and fatty matter, he added cane-sugar in the proper physiological proportion to represent the carbohydrates. Finally he added the salts that are contained in natural milk, in the exact quantities in which they are found in that substance. Theoretically this artificial milk constituted a perfect food, since it contained the three principal groups as well as the salts. Nevertheless, the mice on which the experiments were made did not live, although they relished the diet and ate plentifully of the food.

Lunin was studying the rôle played by the mineral salts in nutrition, and at the time when he announced the results of his experiments the scientific world was considerably surprised.

It is now well understood that the factor which was lacking in Lunin's artificial milk, that which was necessary in order to make this product capable of sustaining indefinitely the life of

his mice, was that chemically intangible constituent, the active living force, in fact the enzymes or unorganized soluble ferments that were destroyed by his method of preparing and treating the milk. This fact explains why sterilized milk and other sterilized foods have not fulfilled the general expectations of the scientific world. Received at first with enthusiasm by the medical profession, it was gradually shown in the course of time, that they did not constitute an ideal method of feeding. Many medical men, recognizing the lack of result without knowing the real cause of failure, returned to good natural milk, either simply diluted with water, or not. Careful observation showed that milks that had not been heated beyond a natural temperature were more easily digested, and gave greater vitality to the system. It was observed that sterilized milks produced in children soft muscles, a generally irregular development, and a weakened resistance to infectious diseases. Some men even stated that they were the indirect cause of infantile scurvy. And these unsatisfactory results were observed even when the very best methods of blending were being used, and the milk had been modified so as to make it, from a chemical standpoint, not only merely resemble mother's milk, but actually almost identical with it.

These facts were verified, but without any reasonable explanation of the cause. However, the work and thorough investigation to which milk has been subjected within the last few years, have thrown an entirely new light upon the subject. The constituents which are lacking in sterilized milk, or more properly speaking, are destroyed when the temperature of the milk is raised to 176 deg. Fahrenheit, are the enzymes, those mysterious ferments which govern the equilibrium of the protoplasm. Not only in the animal kingdom, but in the vegetable kingdom as well, every vital phenomenon seems to be dependent on these ferments. The grain of wheat, planted in the soil, owes its development and growth solely to these special ferments. Under the influence of soluble substances secreted by microbes in the bosom of the earth, the grain of wheat emerges from its lethargic condition and becomes a living organism, capable of growth and reproduction. It has been shown that absolutely sterilized earth is useless for the growth of seeds, and that these do not come to maturity in such soil. (Ref. Nobbe, Dresden.)

The same thing applies to the animal kingdom. Animals kept in an aseptic atmosphere and fed on sterilized foods cannot live. The quantity and proportion of albumen, of carbohydrates

and of fats may be perfect, but that particular force which separates and disintegrates them into their ultimate terms of absorption no longer exists, and these food substances become inert. According to Kejanitzin, the disastrous effect of the sterilized air breathed, continues even after the animals have again been placed in a normal atmosphere. This author explains, that in breathing ordinary air the microbes inhaled are absorbed by the leucocytes, which separate the ferments which these microbes contain and spread them throughout the organism, where they regulate oxidation and prevent the accumulation of leucomains and other toxic principles.

It is a path abounding in beautiful discoveries that science has opened. It is found that the malignant ferments, producers of illness and death, are in reality only an accident in nature. If there exists those that are responsible for the shortening of some lives, on the other hand their very kin are they that since the creation of the universe have perpetuated species, and finally, the evolution of the higher organisms is corollary to that of the infinitely small. Although there are injurious germs whose secretions disturb the vital harmony and cause a disturbance of the physiological phenomena, yet by way of retaliation or compensation there are a much greater number of those whose secretions are of a direct benefit. It is true that, as yet, we know but a small proportion of these, but the list is growing and continues to grow as time passes. Let us salute *en passant*, the noble germs, creators of fine wines, of good ciders, of fragrant vinegars, and of savory beers.

If we have entered somewhat fully into the above considerations, it is because the ferments that are found in milk originate both in the organic cell and in the bacterial cell; the former, being necessarily in the milk because they are contained in the organism and in the gland cells which give rise to the milk; the latter, being accidental, but at the same time always found in the milk, since they are secretions of the bacteria which exists everywhere and consequently gain entrance into the milk, many of them even before it leaves the galactiferous ducts. These bacterial ferments were thoroughly studied long before the cellular ferments, and since the observations and work of Duclaux are known intimately. They are for us less interesting than the others, and to them, the cellular ferments, we would more particularly devote our attention.

The clear ideas which we at present possess regarding the soluble ferments of milk, have taken a long time to come to light. While the first work on the digestive ferments of the

human alimentary canal dates back some fifty years, only five years have elapsed since any serious attention has been given to those of milk. After having discovered ptyalin in the saliva, pepsin in the gastric juice, and the tryptic fements in that of the pancreas, science rested. Bacteriology acquired a tremendous impetus from the ideas of Pasteur; a keen interest was aroused that engrossed all thinking minds. But by a return to the original ideas, bacteriology, in discovering the secretions of the microbes, brought these same thinkers back to the study of the secretions of the organic cells, and demonstrated that the two are identical, and that there are no biological difference between the constituent cells of our organism, and those minute cellular individuals, the microbes.

Babcock and Russell, of Wisconsin, were, so far as we can learn, the first to demonstrate the presence of soluble ferments in milk.

In the earlier days the various phenomena that take place in milk were explained as being solely chemical—the re-action of one body on another. Then, in the time of Pasteur, the facts became a little better known, and all the transformations of milk were ascribed to the action of bacteria. Lloyd and Freudenreich made known the considerable part played by bacteria in the maturing of Cheddar and Emmenthaler cheeses.

Babcock and Russell, struck by the fact that all the changes taking place in milk could not be explained by the activity of bacteria alone, undertook a long series of experiments in order to elucidate the apparent difficulty. They experimented partly with natural milk and partly with milk that had been worked by cheese-makers. To samples of fresh milk they added in some cases chloroform, in others ether, both of them substances which arrest bacterial growth. They found that coagulation of the milk set in within a few days without any corresponding increase of acidity. In these experiments the anesthetic would have prevented coagulation if that phenomenon were due entirely to bacterial life.

Then, as Conn had announced that saprophytes possessed the power of secreting an enzyme analogous to rennet, and capable of coagulating milk, and as Duclaux, in a lengthy communication had brought to light the important rôle played by the saprophytes in the phenomenn of the maturing of cheeses, Babcock and Russell determined to investigate the question as to whether the coagulation of the milk in spite of the use of the anesthetics had been caused by bacteria. They took every precaution, surrounding themselves with every safeguard in

order to prevent the contamination of the milk by saprophytes. The udder of the cow was carefully sterilized, the first milk was thrown away, and then the balance was milked direct into bottles containing an excess of an antiseptic preparation. By this process the bacteria with spores which produce the coagulating ferment were excluded, and if by chance any of them, coming from the lactiferous ducts, reached the milk, they were immediately paralyzed. Under these conditions which would eliminate all bacterial activity, the same phenomena of coagulation and transformation of the casein took place as before, and in the same time. These experiments were repeated with all antiseptics known to arrest microbial reproduction, such as fluoride of sodium, salicylic acid, etc., and the results were always the same. Moreover, in proportion to the age of the various samples of asepticized milk, these exhibited a gradual increase in the percentage of albumoses, formed at the expense of the casein. For example, in milk twelve days old, the proportion of the products of this digestion was 30 per cent., while in the same milk, two hundred and forty days old, the proportion was 63 per cent. Babcock and Russell then arrived at the conclusion that besides the organized ferments, there are in milk other ferments which are inherent in the milk itself. In pursuing their investigations further, they found these ferments in the milk of all the mammifers that they studied (ass, mare, goat, sheep, sow, buffalo, and woman). In the cow's milk it is particularly abundant and more easy to isolate.

To this ferment they gave the name of Galactase, and classified it in the same family as Trypsin, the pancreatic enzyme.

This view of the matter was confirmed in the very same year. Bertrand and Bourquelot, without knowing anything of the work of Babcock and Russell, demonstrated by other processes the presence in milk of oxidizing ferments. As long ago as 1881, Arnold had found that fresh cow's milk became blue on contact with tincture of guaiac, and that this reaction is no longer produced if the milk is heated to a temperature of 80 deg. C. In 1890 Kowalesky established undeniably that the same reaction takes place in milk when mixed with old turpentine. But at that time this reaction was attributed to the presence of ozone. Later it was recognized that free ozone cannot exist in the system, and Bertrand and Bourquelot demonstrated that the reaction of milk toward oxidizing agents is due to the presence of a ferment. Of itself it is powerless to oxidize oxidizable substances without the assistance of an intermediary agent highly oxygenated, such as the tincture of

guaiacum, old turpentine or oxygenated water. But, when these agents yield their oxygen to this ferment, the latter is able to hold it, and in consequence to oxidize any oxidizable substance with which it comes into contact. For example, if some drops of tincture of guaiac are added to fresh milk, this does not change color. But if at the same time some drops of oxygenated water are poured into the milk, a blue color begins to show itself at once. The ferment has absorbed a portion of the oxygen, and coming into contact with the guaiac has oxidized the latter. Thus this ferment belongs to the family of anaeroxydases. At this same time Dupouy, and in the following year (1898) W. Raudnitz, studied this oxydase and found that it is present in the milk of the goat, the cow, and the ewe, and that it is absent, or that its action is very weak, in the milk of the ass, the mare, the dog, and in human milk. Marfan and Gillet have also studied this ferment, and confirm its presence in the milk of the cow.

In 1901 Spolverini took up this line of research and recognized in cow's milk the presence of pepsin and trypsin. Working on milk aseptically treated, and in which perfect asepsis was maintained by thymol, he placed in a drying-stove, at 104 deg. F., various quantities of milk, some acidified for the research for pepsin, others alkalized for the research of trypsin. After a certain time he determined the quantity of soluble albumen in it by the biuret reaction. A boiled sample served as a means of verification. By proceeding in this manner, Spolverini found that the pepsin and trypsin were to be met with in all the milks, but were most abundant in cow's milk. The proportion diminishes in the milk of the dog, the goat, human milk, and that of the ass.

Besides these ferments, of which we have already spoken, still another is to be found, which Spolverini identifies with the glycolytic ferment of the blood. If the sugar contained in a given quantity of fresh milk is determined, and the latter is placed in a drying-stove at a temperature of from 38 to 41 deg. C., and the quantity of sugar is again determined after a lapse of twenty-four hours, it will be found that the quantity of sugar has considerably diminished. A portion has been destroyed. This is by the action of a glycolytic ferment. This ferment shows itself fairly active in cow's milk, but slightly less so in other milks. Moreover, in 1901, Luzzati, Biolchini, and Marfan, and in 1902 Gillet, as well as Spolverini, separated still another ferment that belongs to the family of hydrolytic ferments. Under the influence of this ferment monosac-

tyrin resolves itself into butyric acid and glycerin. These authors operated by distilling a mixture of milk and monobutyryin, and in then determining the acidity of the distilled products. They encountered this reaction of splitting up monobutyryin in the milks of the woman, dog, cow, goat, and ass, stronger in the former, and less energetic in the latter. They have agreed upon giving this ferment the name of lipase, a name which Bourquelot had given to a ferment of the same nature, which Hanriot was the first to discover in the blood.

Summing up the various researches and discoveries made in connection with cow's milk, we find, then, that this milk contains numerous ferments. We have determined definitely the presence of trypsin and of pepsin, of the lipasic and oxidizing ferments, and of a glycolytic ferment. There is, moreover, reason to expect further discoveries in this direction, and this is not improbable when the extremely complex nature of milk is taken into consideration.

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## Original Articles

### PHARMACOLOGY AND THERAPEUTICS OF SALICYLIC ACID AND ITS PREPARATIONS.\*

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Salicylic acid (ortho-oxy-benzoic acid  $\text{C}_6\text{H}_5\text{COOH}$ ) is an organic acid which exists naturally in the flowers of meadow sweet (*spiraea ulmaria*), and as methyl-salicylate in the volatile oils of the leaves of wintergreen (*gaultheria procumbens*), and the bark of sweet birch (*betula lenta*). It is also a derivative, probably, by double oxidation of salicin, a glucoside, obtained from several species of *salix*, the willow, and *populus*, the poplar, trees of the natural order *salicaceae*.

Natural salicylic acid may be obtained, therefore, from natural salicylates, the oils of wintergreen and sweet birch (each representing about 81 per cent. of the pure acid), and from salicin, by heating with caustic potash and treating the product with hydrochloric acid. Synthetic salicylic acid and salicylates were first evolved by Kolbe, in 1874, from carbolic acid, caustic soda, and carbonic acid gas, with subsequent treatment as in the case of salicin. The artificial product constitutes very largely the therapeutic article in use at the present day, and, though chemically identical with the genuine, is yet, as would appear from the experiments of Stokvis, distinctly more toxic—

\*This paper was adjudged the best in the DOMINION MEDICAL MONTHLY'S Prize Competition.

a circumstance which that observer ascribes to a difference in power of osmosis and consequent greater delay in elimination of the synthetic article. Charteris<sup>1</sup> noted in experiments upon rabbits that the artificial acid, administered in much smaller doses than the natural product, was badly borne, and continued for any considerable time produced death in the animals. Undoubtedly, the untoward effects which have been frequently observed after the administration of the salicylates, are due in many cases to toxic substances such as hydrochloric acid, and—of more importance and frequency—carbolic acid derivatives (paraacresotic and orthocresotic acids), which have not been fully eliminated in the evolution of the drug. There should under no circumstance be any suggestion of the odor of phenol, nor should any residue remain when the therapeutic article is heated on platinum foil.

*Solubility.*—Salicylic acid is soluble in 2.4 parts of alcohol; in 450 parts of water at 59 deg. F. Its solubility in water is greatly increased by the addition of the phosphates (10 per cent.), citrates and acetates of the alkalies, or 8 per cent. of borax. It may also be dissolved in 2 parts olive oil (hot), or in 30 parts sweet spirits of nitre.

#### PHYSIOLOGICAL ACTION.

*Local Action.*—Salicylic acid has practically the same effects as the salicylates and salicin when administered to animals, except that it is much more irritant to the skin and mucous membranes. Not infrequently it causes irritation of the mouth and throat when taken internally as a powder, and congestion and erosion of the gastric mucosa have been noted in rare cases. In dilute solution, it is largely free from these injurious qualities; although anorexia, indigestion and nausea are not infrequent attendants upon its use, in either way of exhibition. These effects have been ascribed to the direct interference of the drug with the action of the digestive ferments upon food. It has produced albumen in the urine and hematuria by irritation. Insufflated, salicylic acid is decidedly irritant to the respiratory passages, exciting coughing and sneezing. Applied locally to the skin, swelling of the epidermis occurs, followed, if the contact is prolonged, by desquamation, exfoliation, and eventually, by edema and necrosis. It is also anhidrotic, checking local perspiration when locally applied.

*Absorption and Elimination.*—Local absorption of salicylic acid when applied as an aqueous solution, an ointment, or as

the oils of gaultheria, or birch, to the unbroken skin, takes place somewhat readily. Drasche noted its appearance in the urine in a very short time after an application of its alcoholic solution to the skin. The acid and its salts are rapidly absorbed from the stomach and intestines, and are eliminated in very much the larger part by the kidneys. Salicylic acid and its compounds are taken up by the blood as salicylate of sodium (Salkowski). The theory of Binz that the acid is liberated in the blood by the carbonic acid formed in the tissues, has been disproved by the experiments of Feser and Friedeberger. Kohler has shown that



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only in the blood of asphyxia does such a liberation occur. It is probable that even the insoluble salicylates of strontium, bismuth, etc., are decomposed in the intestines and yield their acid to the blood as the sodium salt. Kumagwa's experiment showed that salicylic acid was absorbed from the intestines so rapidly that it failed to act as an antiseptic upon the bowel contents, and thus diminish the indican of the urine. Elimination is correspondingly rapid. Soullier detected the drug in the urine ten to twenty minutes after its exhibition by the stomach in 15

grain doses. When double this dose was taken, the urine responded to the test in five minutes.

Blanchier and Rochefontaine found that salicylate acid injected into the veins of a dog appeared in the urine in eight to ten minutes; in the saliva, in four to five minutes; and in the bile and pancreatic juice, in fifteen to twenty minutes. It is excreted in the urine chiefly in the form of salicyluric acid (a combination of the acid with glycocol), but also as salicylic acid and salicylate. Under one or other of these forms, Masso recovered virtually the whole amount of the ingested drug. Byanon found traces of salicylic acid in the urine eight days after administration of the last dose. Weill, however, regards this period of elimination as not extending beyond thirty-three to fifty-six hours.

Whether the secretion of urine is increased by the salicylates or not, has not been absolutely determined. That there is considerable increase (30 to 100 per cent., according to various authorities) in the elimination of uric acid and urea is generally accepted, in view of the experiments of Haig, Kumagwa, and others; and the influence of these salts may account for slight neurosis. It has not been shown whether the hypersecretion of uric acid and urea represents changes in metabolism with increased formation of these salts, or is simply due to an acceleration in the eliminative process. In the treatment of acute rheumatism by salicylates, this elimination markedly increased during the first few days, usually declines thereafter, oftentimes, to a point below the normal output. Prof. Séé noted particularly the increased uric acid excretion in gouty cases, following administration of the salicylates. The sulphur compounds, as well as nitrogen, are also augmented, and there is some degree of leucocytosis (Cushing), all of which indicates some modification of metabolism, but whether accompanied by an increased oxidation is yet unknown.

It is to be remembered that urines containing salicylic salts reduce Fehling's solution, as well as a pseudo-reaction to Trommer's test, to some degree, and may thus mislead. A purple color is struck with perchloride of iron solution, which thus affords a simple test for the detection of the drug. The green-colored urine observed after free exhibition of the salicylates, as well as occasionally in susceptible individuals, appears to be due to indican and pyrocatechin.

The salicylates very probably enter all the fluids of the body; they have been detected in the bile, the flow of which they

slightly augment. Pföff noted increased concentration—the bile solids being in greater relative proportion than the fluid constituents. Traces of the drug are said to have been found in the bronchial secretions, saliva, milk, pancreatic juice, cerebro-spinal fluid, and in the serosity of blisters.

*Action on Circulation.*—Small doses of the salicylates have little or no appreciable effect upon the heart (Ewald, Priess, Golddammer). Some observers have, however, noted slight acceleration and have imputed it to direct action on the cardiac muscle.



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Oltremare and Danewsky found that moderate doses accelerated the pulse and increased arterial pressure; and the latter observer demonstrated that the rise in pressure was due to stimulation of the vaso-constrictor centres in the medulla. Larger doses, on the other hand, depress the heart directly and slow and weaken its action, the while the arterial pressure falls steadily. Buss and Moehli ascribe with apparent reason the slowing of the heart and fall of blood-pressure partly to the effects of perspiration and fall of temperature. There can be no doubt, however, that the tendency of the salicylates, even in medicinal doses, is to depress and weaken cardiac action.

*Action on Respiration.*—On respiration the salicylates have very similar effects to those on circulation. Therapeutic doses have no perceptible effect; with larger dosage, there is a primary acceleration of breathing, to be followed later by progressive slowing and more or less dyspnea; after poisonous doses, these symptoms become more and more urgent, until death eventuates from cardiac failure and asphyxia.

The respiratory centre is primarily stimulated conjointly, perhaps, with irritation of the pulmonary vagi, and later depressed or paralyzed. According to Livan,  $\text{CO}_2$  is excreted during the period of respiratory acceleration, proportionate to the amount of salicylates ingested.

*Action on Nervous System.*—The nervous system is comparatively little affected by salicylic acid in ordinary doses, except, perhaps, in cases of marked susceptibility. There is usually tinnitus aurium, but this symptom is more probably due, as in quinine, to tympanic congestion rather than to any direct effect upon the auditory nerve. We have seen that under the effects of large doses the respiratory and vasomotor centres are directly affected by the drug, and the cerebral cortex is often profoundly affected as shown by the delirium, convulsions and local paryses.

*Diaphoresis.*—The perspiration which follows the ingestion of the salicylates has been ascribed in part to the dilatation of the cutaneous vessels which Maragliano showed the salicylates effected in common with the antipyretics, most probably, by exciting the vasodilator centres in the medulla and, partly, by a direct influence on the sweat centres themselves (Cushing). The sweating is at times very profuse and exhausting (Ewald).

*Influence on Temperature.*—The temperature in health is not lowered by administration of the salicylic compounds, unless much more than therapeutic doses are taken (Sée, Ringer Furbringer). It may have some control over heat formation, however, since North observed that the ingestion of the acid inhibited the normal rise of temperature following physical exertion; North does not appear, however, to take into account the effects of exercise in producing cutaneous vascular dilatation and diaphoresis. In fever, its antipyretic action is usually very marked; it was in this rôle that the drug made its début as a therapeutic agent. It is certain, however, that its power to lower temperature varies greatly in different forms of fever (Bartels, Senator, etc.). It has a specific action in the fever of rheumatism, although, at times, it is ineffectual in controlling

the hyperpyrexia of this disease, just as quinine fails in exceptional cases to control malaria. Wolfberg and Zimmerman are nevertheless not inclined to concede any decided antipyretic effect to the salicylic acid group. Justi holds that the fall of temperature induced does not reach its maximum for five or six hours after administration. Hare, from personal studies, surmises that salicylic acid lowers fever by diminishing heat production and by increasing heat dissipation. If it be conceded, however, that the acid plays its chief rôle as an antipyretic in the fever of acute rheumatism, why may its action not be ex-



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plained on the theory that it antidotes the toxin, or *matrices morbi*, which in the first place is the exciting cause of the fever?

*Salicylism*.—In addition to the various untoward symptoms noted under the physiological effects of salicylic acid, there may be added: extreme gastric irritability and vomiting, headache, amblyopia, dilated pupils, feeble, shallow breathing, dyspnea, albuminuria and hematuria, decubitis, visceral congestions, and local necroses. Its prolonged use, even in therapeutic doses, is apt to cause marked anemia, and larger dosage may cause destruction of the corpuscles. Binz is of opinion that it is an abor-

tifacient in those women who have some tendency thereto. Certainly, menorrhagia and metrorrhagia have been ascribed to its use. Discretion should be exercised in prescribing any of the salicylates in albuminuria, renal irritation, middle ear disease, meningeal inflammations, and in diseases with marked cardiac weakness, from its well known physiological effects upon the particular structures involved in these diseases. It should be given with caution to alcoholics. The salicylates have seldom, if ever, directly caused death. Eccles<sup>15</sup> failed to find a single fatality from its use recorded in the leading works on toxicology.

*Antiseptic Action.*—The movements of protozoa, leucocytes, and plant protoplasm are arrested by salicylic acid, which is also a very potent destroyer of organized or living ferments. It retards the digestion of proteids by the gastric and pancreatic juices, and the decomposition of glucosides by the unorganized ferments, pepsin, ptyalin, trypsin, etc. The decomposition of proteid solutions, of urine, and of alcoholic and acetic acid fermentations is more or less completely retarded and prevented by comparatively small quantities of salicylic acid. Prof. Dunham<sup>1</sup> found that 1:960 salicylic acid solution was sufficient to kill *staphylococcus pyogenes aureus*, *streptococcus pyogenes*, and *bacillus coli communis*, in two minutes. Miller found that 1 per cent. of salicylic acid checked the action of ptyalin upon starch; to produce the same effect required 10 per cent. of carbolic acid. Vallin, on the other hand, asserts that both the ferments and bacteria rapidly acquired a tolerance for the antiseptic, and the latter transmitted this quality so markedly that succeeding generations of bacteria resisted doses fatal to their ancestors. The use of the salicylates as preservatives of foods, fruits, wines, beer, etc., has occupied very considerable attention of late years, and has called into existence regulative legislation in various countries. The continued use of salicylic acid, in very considerable amounts, cannot be without injurious results, even in conditions of health; how much the more so in cases where its use is contraindicated and yet where its presence may not even be suspected. Neubauer and Bechamp found that in poor wines and cider even so much as 1.5 grammes salicylic acid per litre did not prevent fermentation occurring comparatively early. The Kansas University experiment determined that one part salicylic acid to the thousand (1:1000) is necessary to preserve cider. As much as 4 to 8 grains per pint have been discovered in perishable goods. In 1901 the English De-

partmental Committee<sup>4</sup> recommended to Parliament that salicylic acid should not be used as a preservative in greater proportion than one grain to the pint or pound.\* MacAllister and Bradshaw<sup>5</sup> in England, and Eccles, of Brooklyn, have striven to show the comparative harmlessness of the small quantities of the salicylates ingested in wines and beers particularly, but it is exceedingly questionable if greater amounts are not used than they assert, in view of the results of experiments above given.



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The germicidal effect of the salicylates is well illustrated in the disease of bees termed foul brood, due to schizophytes, which is readily cured by administration of the acid in syrup.

#### PREPARATIONS.

*Acidum Salicylicum* (Salicylic Acid).—Dose, 5 to 30 grains, in pill, capsule, or powder, taken with abundance of milk or

\*The French government interdicted the salicylates as preservatives of wine and beer in 1881 on the ground that even small amounts were injurious.  
—*Bulletin de l'Academie*, xvi., 1886.

water. Taste well covered by syr. aurantii, syr. zingiber, or tr. lavandulæ co.

*Sodii Salicylas* (Salicylate of Soda).—Dose 5 to 60 grains, soluble in  $\frac{3}{4}$  water, 6 alcohol, or in glycerine, taste covered as above.

*Ammonii Salicylas* (Salicylate of Ammonium).—Soluble in water or alcohol; dose 2 to 10 grains, in wafers or capsules; antirheumatic (non-depressant), antipyretic, expectorant.

*Methyl Salicylas* (Artificial or Synthetic Ol. Gaultheriae).—Dose, 1 to 10 minimis.

*Oleum Gaultheriac* (Natural Oil of Wintergreen).—Soluble in alcohol; contains 90 per cent. methyl salicylate, 81 per cent. salicylic acid; dose, 5 to 15 minimis, in emulsion, milk, or capsules.

*Oleum Betulac Volatile* (Oil of Sweet Birch, Betulol).—Dose same as Ol. gaultheriae; very effective when used as injection (Fotheringham<sup>6</sup>).

*Salicinum* (Salicin).—Dose 8 to 30 to 120 grains, in powder, capsules, or solution (which, however, is very bitter).

*Phenyl Salicylas* (Salol).—Contains 40 per cent. carbolic, 60 per cent. salicylic. Dose 5 to 30 grains in pill, powder, or capsule.

*Salophen*.—Contains 51 per cent. salicylic acid. Insoluble in water; soluble in alcohol; dose 5 to 15 grains (1 to  $1\frac{1}{2}$  drams) in 24 hours; antirheumatic, antineuralgic, anti-fermentative in intestinal indigestion, flatulence, gastrectasis, etc.

*Aspirin* (Acetyl-Salicylic Acid).—Soluble in intestines like salol; does not affect stomach, or cause sweating, tinnitus, etc.; non-depressant, antirheumatic, antipyretic, analgesic; very soluble in acid media, and in alcoholic solutions; entitled to first rank as an antirheumatic in the opinion of many. Dose, 10 to 15 grains in cachets, powders (equal parts white sugar), or in alcoholic solution.

*Bismuth Salicylate* (Acid Salt).—Intestinal antiseptic and astringent; exceedingly valuable in intestinal indigestion and fermentation, diarrhea, cholera, etc. Dose, 5 to 10 grains.

*Lithii Salicylas* (Salicylate Lithium).—Credited with special solvent action on uric acid in rheumatic affections. Dose, 5 to 30 grains.

*Hydrargyri Salicylas* (Mercuric Salicylate).—Antisyphilitic, 50 per cent. hydrag. (insoluble salt); used chiefly by hypodermic method.

R. Hydrag. salicyl. . . . .	gr. xxiv.
Benzoinol. . . . .	5.

Sig.: 20 to 30 gtt. every 5 to 10 days, injected hypodermically into gluteal muscles.

Note.—Hydrarg. should be washed in alcohol, and the benzoinol sterilized by heat.—*Fordyce*.

*Sodio-theobromine Salicylas* (Diuretin).—Diuretic, indicated in cardiac and renal dropsy, and in various edematous conditions (should be kept from action of air and from contact with acids); dose, 10 to 15 grains, in powder or water.

*Thiersch's Solution*.—Salicylic acid, 1; boric acid, 6; hot water, 500. Bland, harmless, antiseptic fluid.

*Physostigmiae Salicylate* (Eserine Salicyl.).—Grain 2 to



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ounce solution water, for instillation; indicated in glaucoma, keratitis, neuralgia of eye-ball, etc.

Innumerable other preparations of the salicylates have so little *raison d'être* that they may be safely omitted.

#### THERAPEUTICS.

Salicylic acid and its preparations have been used remedially for their antipyretic, antiseptic, and antifermentative, anti-rheumatic, antipruritic, and antihidrotic properties.

*Antipyretic Uses.*—Salicylic acid was originally introduced by Buss, in 1874, as an antipyretic in typhoid fever. This use of the drug has been almost entirely superseded by rational hydrotherapy, next to which in effectiveness is the antipyrine series. Bartholow believes the weight of authority still inclines to the view that the salicylates are of real value in reducing temperature in typhoid as well as in pyemic septicemia, puerperal fever, and diphtheria.

*Antiseptic and Antifermenative Uses.*—Kalbe observed in 1875 that salicylic acid has an inhibitory influence in preventing the fermentation of milk. It is used very largely at the present day also as a preservative of meat, fruit, beers, and wines, as has been already noted. This use is far from safe. The quantity used should in every case appear on the label as a requirement of law. Salicylic acid is occasionally employed in the treatment of wounds and as a dressing. As salol, it is sometimes used as an injection in gonorrhea, but far more frequently as a supposed intestinal germicide and disinfectant. Salol is decomposed in the upper intestinal tract into 36 per cent. phenol and 64 per cent. salicylic acid (Wood). It has been given with apparent benefit in typhoid fever, intestinal indigestion, diarrhea, cholera, etc., although its value must seem largely conjectural, in view of the fact that Kumagwa found that putrefaction in the bowel, if correctly measured by the amount of inulin in the urine, was not at all diminished by free administration, and that enormous numbers of bacteria appeared in the feces afterwards. Hare still maintains the efficiency of the drug in intestinal fermentation and diarrheas arising therefrom. It has also some value as a genito-urinary disinfectant, in cases of pyelitis, cystitis, and urethritis; but it is less used now than a few years ago. It is not without danger to the kidneys (particularly so if diseased), even in small doses (Hesselbach). The dark, dusky green, smoky, or even black urine characteristic of carbolic acid, is liable to follow free exhibition of salol. A soluble sulphate (e.g., Glauber's salts) is said to largely prevent injury from the carbolic ingredient, if taken continuously with the salol.

*Antirheumatic Use.*—It is for their unparalleled effects in acute articular rheumatism that the salicylic acid preparations are chiefly prized. From their first use by MacLagan,<sup>7</sup> of Scotland, and Stricker, of Berlin (1876), to the present day, they have constituted the almost exclusive remedy for this affection. Therapists are divided in their opinion of the salicylates as specifics.

One side, while admitting the unexcelled effects upon pain, joint swelling, and frequently upon temperature, maintains that upon the underlying cause, the tendency to relapse and to cardiac complication, they have no effect whatever. Some maintain the duration of the trouble is in nowise shortened, and that a very marked anemia and weakness follow. The other side, while admitting the danger of relapse and of cardiac involvement, maintain an exact parallelism between the effects of salicylates in acute rheumatism and of quinine in malaria, and everyone considers quinine a specific. The crux of the disagreement lies



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in the liability of acute rheumatism to relapse and to cardiac complication, under any form of treatment.

The following authorities regard the salicylates as specifics in rheumatic fever: Bouchard, Traube, Beaumetz, Strumpel, Sée, Pûbam, Levison, Yeo, MacLagan, Charteris, Stevens, Shoemaker, Cushny, Wood. On the other hand, the following, while admitting its effects upon pain, swelling, and possibly temperature, deny that it is a genuine specific: Ewart, Jaccond, Gubler, Broadbent, Carafy, Boggs, Spencer, Greenhow,<sup>11</sup> Syers, Butler, Stengel, Hare, Bartholow.

Comparison of results under the preceding alkaline, and later salicylic treatment, so far as cardiac complications are concerned, favors the former.

St. George's Hospital reports, as collated by Dickinson,<sup>1</sup> show the proportion of cardiac cases occurring under the old alkaline treatment as 1 in 54, and under salicylates alone, 1 in 12. Fuller places the proportion under the old treatment as 1 in 48. Menzer<sup>2</sup> thinks cardiac complications occur under alkaline treatment in 30 per cent. of cases, under salicylates in 44.75 per cent.

#### THEORIES OF ACTION.

Notwithstanding prolonged investigation and fairly complete knowledge of pharmacological action of the salicylates, their mode of action in rheumatism is very imperfectly understood (Hale White<sup>14</sup>).

There are three well recognized theories of their action in acute rheumatic fever (Ewart<sup>15</sup>).

1. As *Sedative Remedies*.—That of a nerve check suppressing the pyrexia through influence on the nerve centres, and by allaying local inflammation through influence on peripheral vaso-motor mechanism—active while treatment is continued: powerless, however, to modify the course of the disease.

2. As *Antiseptic Remedies or Bactericides*.—This presumes the bacterial origin of acute rheumatism from its close resemblance to acute infectious diseases. The theory is coming into general acceptance; but until the specific organism is identified this view is a mere postulate. Dr. Menzer, a strong advocate of the infectious origin of rheumatism, believes, nevertheless, that salicylic acid is not a direct bactericide, nor has it power to increase the bactericidal influence of the blood. By studying elimination through the urine, Gifford<sup>16</sup> reaches the conclusion that the amount of salicylic acid in the blood is never greater than 1:52520, while a strength of 1:1000 to 1:500 is necessary to be considered germicidal.

3. *Metabolic or Antitoxic Remedy*.—The salicylates, according to this theory, correct some fault in the blood or lymph (lactic acid and its combinations—Prout and Latham), by neutralizing an infectious toxin, or by dealing with the products of unhealthy and disturbed metabolism. It is objected to this theory that we do not have conclusive evidence of excess of lactic or uric acids in the blood, although it might afford some explanation of the characteristic hyperacidity and of the presence of salicylic acid, etc., as decomposition products in the urine.

The greatest danger in acute rheumatism is the pronounced tendency to heart involvement, and every case should be regarded, not as an arthropathy, but first and before everything else, as a case of impending peril to the heart, endangering the whole after-life of the patient. The combined use of the salicylate and full alkaline treatment gives the best results. The case should be treated vigorously. A chologogue purge, first of all; then sodium salicylate in 15 grain doses every 2 to 3 hours, so that from 2 to 3 drams are taken in the first 24 hours, unless



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tinnitus is marked, when the dose should be diminished; or oil gaultheriae (natural), gtt. 10 to 15, in capsules or emulsion every 2 hours; or salicin in 20 grain doses; or strontium salicylate in like doses—given in every case until a constitutional impression is made, as evinced by tinnitus. Parallel with the salicylates, the alkaline treatment should be pushed. The alkali may be given in combination, or better by itself. Dickinson gives potass. carb., 1 grain, every 3 hours, until the urine is distinctly alkaline, then at longer intervals. Others give sodium bicarb., potass. cit., or potass. bicarb. The urine should never become acid during the whole course of treatment. Conjointly with

the interval treatment, ol. gaultheriae and ol. olivae  $\ddot{\text{a}}$ , should be applied on lint to the affected joints, and surrounded with oiled silk or other impermeable covering. Another good local application is ol. gaultheriae,  $\frac{1}{2}$  ounce, and ungt. ichthyol (10 per cent.), 2 ounces, covered, and the limb bandaged. Where the stomach is intolerant of the salicylates, salophen in 10 or 15 grain doses, or aspirin, can be used. The latter preparation is very highly commended for the relief of pain and pyrexia, and it does not cause such copious sweating as the salicylates (Mackay). Or, again, the salicylates may be given by enema, the bowels having first been washed out with warm water, 20 to 40 grains every 4 to 6 hours may be so administered with excellent results. The patient should be clothed in flannel, head to foot; kept perfectly quiet in bed, with simple diet and abundance of water, and the salicylates should be continued for a week or more after disappearance of every symptom. To counteract the anemia, Peabody gives pyrophosphate of iron along with salicylic acid:

R.	Acidi salicylici.....	5iii.
	Ferri pyrophosphates.....	5i.
	Sodii phos.....	gr. xii.
	Syr. aurantii.....	5iii.
	Aqua q.s.....	5vi.

M. Sig.: One-half ounce every two hours.

*Gonorrhœal Rheumatism*.—Salicylates of very little value; much better is syr. ferri iodid, 1 dram t.i.d.; for the pain, *analgesique baume* (methyl salicyl) affords great relief.

*Muscular and Chronic Rheumatism* are often benefited by the salicylates. Bartholow recommends in the latter:

R.	Acidi. salicylici.....	5iii.
	Elix. cascara sagrada .....	5vi.

M. Sig.: One-half ounce two or three times daily.

In *Gout*, Haig and Sée find them beneficial, while Duckworth, Luff, and others do not regard them of much value.

In *Tonsillitis*, some claim the drug is specific.

In *Pleurisy with serious effusion*, 1 to 2 drams daily of the salicylates is often very effective. Stengel thinks them of great value.

In *Graves' Disease*, which W. H. Thomson<sup>12</sup> thinks is largely due to gastro-intestinal toxemia, he regards the salicylates of great value in acute form, when onset of symptoms is rapid and severe; should be given as freely as in rheumatism.

*Sciatica* is frequently benefited by the salicylates.

In *Glaucoma*, Gifford<sup>11</sup> found the drug of great value, giving one grain for every pound of body weight in the 24 hours, also in non-specific inflammation of the iris.

*Antipruritic Use.*—In *Urticaria Chronica*, 20 grain doses of sodium salicylate is often of very great service. It is also used as a dusting powder with starch and zinc. It is extensively used in eczema, particularly in the subacute and chronic stages. For ordinary ringworm, the following, painted over the area twice daily is rapidly specific:

R. Acidi. salicylici .....	.....	gr. x.
Collodii.....	.....	5ss.

M.

*Antihidrotic Use.*—For *Hyperidrosis* of the feet, equal parts salicylic acid and starch, or talc, will remove the fetor and arrest the trouble, and the same may be used for sweating of the axillæ.

For *Corns*, the following applied every night is generally very effective: Acid salicyl, parts 10; ol. terebinth, parts 5; acetic acid glacialis, parts 2; cocaine hydrochlor., parts 2; collodü, parts 100.

In *Diabetes Mellitus*, sugar sometimes disappears from the urine on administration of the salicylates, although it recurs on discontinuance of the drug (Müller).

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## SMALLPOX.\*

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Owing to the great ravages of this disease from very early times the words in Ben Johnson's epigram very strikingly apply to the universal results which followed its course, not only in Europe, but in Asia, and also later in America, and indeed it was not until the nineteenth century, when the beneficial effects of vaccination were noticeable, and that it could not be said of it, "Envious and foul disease, could there not be one beauty in an age, and free from thee?"

The earliest records in regard to the disease are to be found in the writings of Hindostanese, many centuries before the beginning of the Christian era; and next to these come those of the Chinese, which date from the twelfth century B.C.; then follow several Arabians, the earliest being Ahron, a physician of Alexandria, who flourished 610-641 A.D. To Rhazes, a physician of the Bagdad hospital about 600 A.D., we are chiefly indebted for a treatise on the disease. From the fact that none of these writers state the disease is of recent origin, it is surmised to have prevailed before their time.

As to its prevailing in early Greece and Rome there is some doubt, but it is probable the disease was carried along the usual channels of trade and commerce by merchants returning from the East. Certainly the spread of smallpox in Europe during the sixth century was traceable to the returning Abyssinian soldiers after the siege of Mecca, and the Arabian soldiers while engaged in the conquest of Northern Africa, carried it into the countries on the southern shore of the Mediterranean, and from there it spread during the seventh and eighth centuries into Southern Europe.

A most interesting account of the disease is given by Gregory of Tours in the sixth century. He says: "Last year the State of Tours was desolated by a severe pestilential sickness. Such was the nature of the infirmity that a person after being seized with a violent fever, was covered all over with vesicles and small pustules. The vesicles were, while hard and unyielding, very

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A series of forty lantern-slides accompanied the paper.

painful. If the patient survived to their maturation, they broke out and began to discharge, when the pain was greatly increased by the adhesion of the clothes to the body." In describing the disease as it affected one of the court ladies, he states: "She was so covered with the vesicles that neither her hands or feet nor any part of her body remained exempt, for even her eyes were wholly closed by them." This distinguished lady, wife of Count Eborin, was, when nearly at the point of death, miraculously cured by drinking some water which was said to have been used for washing the tomb of a saint.



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It was a contemporary of Gregory's, Marius, Bishop of Avenche, who first used the word "variola." His words are: "This year (569-70) a violent fever with flux of bowels and variola afflicted both Italy and France." But little is known of the progress of smallpox in Europe during the Middle Ages; that it prevailed from time to time is evident from monastic writings which chiefly record miraculous cures that happened.

Manuscripts in the British Museum, written in England during the tenth or eleventh century, contain prayers or exorcisms which were used for defence or deliverance from "the

*Iathan pockas,"* and the writings of the two English physicians, Gilbert Anglicus and John of Gadesden, who flourished respectively in the thirteenth and fourteenth centuries, both wrote of smallpox, and the latter, who was court physician, states that he treated the King's son, by what is now known as the red light cure, although this form of treatment was not original, as it was practised in the tenth century by Rhazes in Arabia, and Bald in England.

The terms variola, vayrola, veyrora, variolas, and nubus varicus, are mentioned in the "Acta Sanctorum" as being used in England between the years 800 and 1400, and an interesting work in the British Museum entitled "Sickness and Health," written by Bullein and published in 1562, both smallpox and syphilis are referred to, the latter being spoken of as the "French pockes," and Shakespeare refers to Smallpox in "Love's Labour's Lost," when he makes Rosalind exclaim, "O that your face were not so full of O's!" to which the Princess replies, "A pox for that jest!"

We have thus far considered the existence of smallpox from the earliest times, but Ben Johnson's "Epigram to Smallpox," written in the seventeenth century, indicates how general the disease must have been, and although exact statistics are wanting, yet the following extracts from earlier writers and historians clearly indicate how prevalent and severe was the disease.

In the sixth century Gregory of Tours records: "The State of Tours was desolated by it." Later in the ninth century, Isaac the Jew states that smallpox "happens to all persons," and Rhazes writing later in the same century says that "hardly any one escapes it."

Then there follows a lapse of time coincident with the "Dark Ages," during which little is known regarding it. However, in 1550, Vidius says, "All persons are attacked by it in the course of their lives," and Mercurialis held that "almost every person must have it once." Helvetius, in 1723, speaks of "the unavoidable necessity of undergoing it at one time or another." Hillary (1735) says, "There is no distemper more difficult to guard against than they are, and always have been, ever since they appeared in the world." Lettsom (1801) wrote, in reflecting upon its ravages, "The mind revolts in horror." George Bell, Edinburgh, writing in 1802, says, "The smallpox is one of the most severe and dangerous diseases to which mankind is subject. Ever since its introduction into Europe, more than a thousand years ago, it has descended with undiminished violence

from generation to generation, and every effort hitherto made to extirpate it has failed."

Turning to the New World, where our knowledge of it begins in 1507, when whole tribes were exterminated by it, the records of Mexico are equally appalling, for in that country it suddenly smote down 3,500,000 persons, "leaving none," says the historian, "to bury them," and Catlin mentions that of twelve million American Indians, six million fell victims to smallpox.

As an indication of the extent and fatality of this disease, Bernouilli, the mathematician, calculated that no fewer than fifteen million of human beings died every twenty-five years during



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the eighteenth century, and Süssmelch, of the time of Frederick the First, estimated that nearly everyone had smallpox, and it carried off a twelfth part of mankind.

In view of the fact that the type of the disease which has been epidemic in this country and the United States for the past four or five years has been of an unusually mild character, it may not be out of place to consider a little more closely the fatality and the mortality of the disease as gleaned from records of a more or less exact character.

In Iceland, in 1707, 36 per cent. of the population perished. In Mexico, in 1520, "50 per cent. of those infected died of the distemper." And in England, during the eighteenth century, it is stated that from 10 to 18 per cent. succumbed to it.

Dr. Jurin, Secretary of the Royal Society, who published reports from 1723-1729, states that the risk of death from smallpox "increases after the birth as the child advances in years," and he was of the opinion that out of every 1,000 children that are born 386 died without having the smallpox, these 386 being not above two years of age. In making his calculations, however, it would appear he did not set down any deaths below two years as due to smallpox, classifying them under overlaid chrysoms, infant's convulsions, etc. This admission on his part makes one very much question his percentages, knowing as we well do that the disease is very fatal to children under two years of age, as, for instance, in summing up the smallpox statistics published regarding Geneva, The Hague, Kilmarnock, Edinburgh, Manchester, Warrington and Chester for former centuries, we find that of 36,755 smallpox deaths no less than 17,252 were under two years of age.

The report of the hospital at King's Cross, which was opened in 1740, for the years 1746-1763, shows that 1,634 deaths occurred amongst 6,456 cases, or a fatality rate of 25.3 per cent., while for the last twenty-five years of the century it rose to 32.5 per cent., and later in the hospitals of the Metropolitan Asylum Board, opened in 1871, the rate varied from 18.7 per cent. to 14.2 per cent.

The following table gives some indication of the mortality among both the vaccinated and the unvaccinated in outbreaks of

PLACE	TIME.	Total Number of Cases.	Death rate per 1,000 Cases	
			Unvaccinated	Vaccinated
France.....	1816-41	16,397	16.1	1.0
Quebec.....	1819-20	Not stated	27.0	1.7
Philadelphia.....	1825	140	60.0	...
Canton Vaud.....	1825-29	5,838	24.0	2.2
Verona.....	1828-39	909	46.6	5.6
Milan.....	1830-51	10,240	38.5	7.6
Breslau.....	1831-35	220	53.8	2.1
Wurtemburg.....	1834-35	1,442	27.3	7.1
Lower Austria.....	1835	2,287	25.8	11.5
Bohemia.....	1835-55	15,640	29.8	5.2
Galicia.....	1836	1,059	23.5	5.1
Dalmatia.....	1836	723	19.6	8.2
London (Hospital).....	1836-56	9,000	35.0	7.0
Vienna (Hospital).....	1834	360	51.2	12.5
Vienna (Hospital).....	1837-56	6,123	30.0	5.0

the disease happening in Europe and America during the first half of the nineteenth century. Many others might be given,

but this one will suffice to indicate what is a well-known fact, that the type of smallpox in the past has been severe.

To further emphasize the fact that the disease has heretofore been of a severe type, I would quote the words of Dr. Moore, the historian, of smallpox. He says:

"The confession that must be made is mortifying to a professional man, for, according to such records as we possess, it appears that, in spite of all medical exertion, the mortality of smallpox had progressively augmented. It has been made evident by calculations from the bills of mortality of the City of London, renowned for medical science, that at the beginning of the eighteenth century about one-fourteenth of the inhabitants died of smallpox, and during the last thirty years of that century, when the practice in smallpox was highly improved, the mortality by this disease had augmented to one-tenth.

"But this immense and increasing consumption of human lives was not the sole evil produced by this distemper, for a considerable proportion of the survivors were pitted and disfigured; some lost one of their eyes, a few became totally blind, and others had their constitution impaired, and predisposed to a variety of complaints, which were productive of future distress, and sometimes of death. These additional calamities cannot be reduced to calculations, but as the mortality from smallpox was continually on the increase, these concomitant evils must have been so likewise."

Coming to recent dates we find the type of the disease in the City of Montreal, in 1885-6, and of which Osler in his "System of Medicine" writes, was of a like similar character to what preceded it. There were 3,164 deaths, and of the 1,332 treated in the hospital, 418 died, a fatality of 31.3 per cent. In Ontario, during the years 1884-99, the following is the record of cases and deaths:

Year.	Place.	Cases.	Deaths.	Fatality.
1884	Hungerford Township .....	202	67	33.0
1885	Province (Generally).....	146	49	10.9
1889	Elgin County.....	49	13	28.9
1899	Russell County .....	30	9	30.0
		429	105	24.45

Or an average mortality of 24.45 per cent.

In view of these facts, which clearly indicate smallpox was virulent in type and has prevailed for centuries, it is not to be wondered that medical writers generally have not described the disease of the type which has characterized the present epidemic. These writers naturally describe types of the disease as seen by themselves; thus it is that Osler, in his excellent text-book, describes not particular cases as seen by him during the Montreal epidemic of 1885, but gives the characteristic symptoms as seen in several hundred cases. It is the type he describes, not the severe or mild cases. So with the present epidemic. One can merely give a short description of the disease as seen in the majority of cases, ever bearing in mind the fact that there are always to be found the atypical cases no matter what standard is set forth.

The history of the disease which has prevailed for some years in this Province is briefly as follows: In the fall of 1896, cases of a mild type appeared in the Southern States, chiefly amongst the colored population, whose employment was principally that of cotton picking. These people were as a rule able to resume their occupation after the appearance of the rash, and it is supposed that in picking the cotton the scabs fell off, and in this manner the disease was spread to distant parts. It is supposed to have been transmitted to the South by returning soldiers from Cuba. From the States it spread to this Province.

The first outbreak of the disease was that which occurred in Essex County in the fall of 1899, when 272 cases were reported, with one death, a mortality of 0.39 per cent. Then in the following years the disease became more widespread, the infection in many instances being traceable to the United States. Although it became so general in this Province, yet the type did not on the whole become more severe, as shown by the mortality, although there were individual instances where the character of the symptoms approached more nearly to the text-book type.

In the winter of 1900-1 it appeared in the lumber shanties of New Ontario, having been brought there by shantymen from Michigan, one man, to my personal knowledge, being the cause of its breaking out in at least four different points, scores of miles apart. In these distant parts the disease made rapid progress before its presence became known, the hardy shantymen becoming a ready nidus for the disease from the fact that nearly all were unvaccinated, and living as they do huddled together in the shanties, one case soon spread it to the rest of the camp, and, as a matter of fact, camp after camp was attacked without one case

being ill enough to call in the services of a physician. These men had suffered from "la grippe" when it was epidemic, and here was a disease in most instances not so severe; true, a few "pimples" appeared afterward, but on the whole they felt better and work was resumed—the pimples were of no account. And it was not until February, 1891, that a case reached the notice of physician, who recognized the true character of it, that the provincial authorities were apprised of the fact.

From New Ontario the disease spread to the older portions of the Province, and has remained with us ever since, although it was virtually wiped out in the place where it first began, for the few cases occurring during the past two years have been directly traceable to an outside origin. The work done in New Ontario by the Provincial Board of Health is an example to all municipalities, for nothing was done except in conformity with the Act and Regulations; none of these was exceeded in any one particular. To their strict enforcement alone is due the results just stated, and I feel satisfied if the local authorities will but enforce the various provisions of the Act and Regulations, similar results are bound to follow when an outbreak is threatened.

The returns for the several years are as follows:

	Cases	Deaths
1900.....	300	11
1901.....	1,838	7
1902.....	2,797	12
1903.....	830	21
	5,795	51

which is a record of 5,795 cases, with 51 deaths, and a case mortality of 0.88 per cent.

That this is a fair indication of the type of the disease which prevailed over the continent generally, the following returns will clearly indicate:

Place.	Year	Cases.	Deaths
Minnesota.....	1890	257	11
".....	1900	1,371	22
".....	1901	8,485	43

A mortality of 0.75 per cent.

When it is remembered that for many years the opportunities for studying smallpox clinically have been very rare, it is not sur-

prising that the extreme mildness of the present epidemic has led to errors in diagnosis; indeed, the many peculiar anomalies which are ever presenting themselves are most puzzling to one who is constantly studying the disease.

Speaking generally, the period of incubation has been 13 days, but many cases have exceeded this by 2, 3 or 5 days.

The unvaccinated are the chief sufferers, although it will be found that now and again one who has either not been re-vaccinated for some years and who presents evidence of the primary vaccination having been more or less imperfect, is attacked, or what is in my opinion a reflection upon some of the glycerinated vaccine which has been supplied to us. Those who have said to have been vaccinated recently have been attacked with varioloid. I have never seen the unvaccinated prove immune where, for instance, in a family the disease runs an unchecked course, except in one instance, that in Essex County, where a child of seven or eight was the only one immune out of a household of eleven.

No age is exempt from it, although it will be found that: in one community the disease will run through the school children before showing itself in the adults of the community, and on the other hand, adults will be the first to be attacked. The spread from one class to another depends upon the degree of intercommunicability.

The initial symptoms as a rule may be described as resembling an attack of la grippe, lasting from a few hours to three days, disappearing by crisis concurrent to the appearance of the rash. Many persons have stated that beyond a little malaise such as headache, nausea, or slight pain in the chest, stomach, or back, that there was nothing to note in their condition until the rash appeared. And again, where the symptoms have been mistaken for an attack of la grippe, the usual antipyretics have aborted the same. This fact has often led patients to blame the physician for making an error in diagnosis, they being thrown off their guard by a subsidence of the symptoms, and hence their attendance was discontinued.

When the temperature has been taken it has been found to vary from 100 deg. to 103 deg. F., and this has been noticed to drop to normal or subnormal with the appearance of the rash, except in cases where there is an accompanying congestion of the lungs or slight bronchitis.

We next come to consider the most difficult symptom of the disease—the rash. In most cases the patient is about and has often resumed his occupation before it is noticed. Frequently

the first cases will escape observation altogether. Where closely observed it will be found the rash begins as macular, though usually one is told the first thing observed is the papuli, and these are two or three days in all "coming out." In the majority of cases the rash is discrete in character and scattered. I have seen it run all the way from one to many hundreds. Occasionally a case will be found which presents the lesions more closely set and becoming semi-confluent or coherent; this occurs usually in the face, sometimes in the extremities.

The papules vary in size, and often they will develop more or less aborted matter. Sometimes papules will be noticed to abort altogether and inspissate, being subsequently shed as small scales. The lesions apparently develop between the epidermis and the layer of cells, immediately covering the papillæ, the true skin not being involved at this stage.

The papules are, as a rule, distinctly raised above the surface. In most cases they change to vesicles earlier than is usual in the disease, and often vesicles may be seen on the second or third day, and umbilication, so generally considered as a diagnostic feature, will be found only in some of these lesions.

Another change noticed as occurring at this stage is the development of solid conical elevations capped with small vesicles, which later contain either sero-purulent or sero-sanguino-purulent fluid, the latter, when dessication is complete, present a dark appearance, and when the crusts have dropped off there remains an excrescence or tubercle. This condition is mostly met with in the face; it finally passes away without disfigurement.

In some cases there will be noticed an aborting of the vesicles, which become inspissated and begin drying up about the fifth or seventh day. This is noticed chiefly on the face.

Again the vesicles may begin to assume the pustular condition as early as the fifth day, and this pustular stage will be rapidly followed by that of dessication. This, too, is noticed chiefly on the face.

While this briefly describes many of the typical cases up to this stage as seen during the progress of the disease, yet many have developed a virulence and been accompanied with symptoms quite in accord with those described in the text-books.

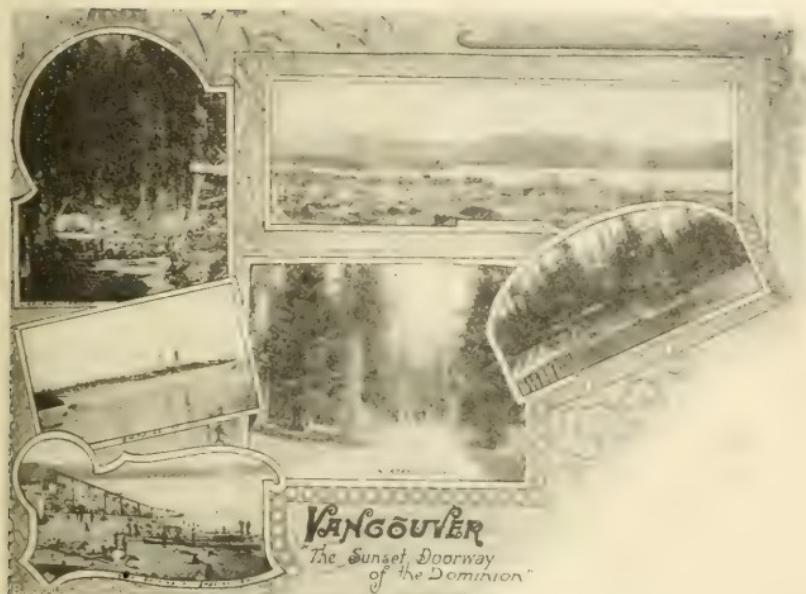
The pustular stage runs a much shorter course than stated by medical authorities, and is accompanied with much less tumefaction, and this as a rule subsides speedily, the formation of scales and shedding of the same being accomplished in from two to three weeks. There is little or no pitting, but there is left a

pigmented spot at the site of each pustule which gradually fades away.

To those familiar with variola and varioloid, it will be found that the disease resembles the latter more than the former, although there is no apparent cause for the modification, the history of either vaccination or a previous attack of smallpox, either in the patients themselves or their immediate ancestors, will be absent.

The question has been frequently asked, Why is the disease mild, and what has brought about this great departure from the classical type? These and many similar questions have been asked, and in the endeavor to explain many theories have been advanced, among these the effect of vaccination in our ancestors, giving an hereditary degree of immunity; the disease having originated in the tropical region, it has been supposed by others that the virulence has been lessened. So far as I am aware, no theory has been advanced that is tenable, and I believe this remains yet to be discovered. I certainly do not agree with those who advance the hereditary effects of vaccination as the cause, for if this were the case, how much more would it be expected that previous smallpox in successive generations of ancestors would be likely to still more modify, if not prevent, attacks of this mild smallpox. On the contrary, I have found that such is not the case, for amongst our French-Canadian citizens, whose parents and grandparents on both sides have suffered from variola of a severe form, the disease is no different than when it occurs in unvaccinated persons whose parents have never been vaccinated.

The theories that the disease is a "hybrid" or one to which a name should be given, owing to the fact that medical writers have not heretofore described it, are both in my opinion fallacious, from the fact that experience has demonstrated that the specific infection of variola is present even in the mildest cases. Further, I consider it confusing to apply the term "varioloid" to these mild cases of variola, and would reserve the term for those cases of smallpox occurring in vaccinated cases only.



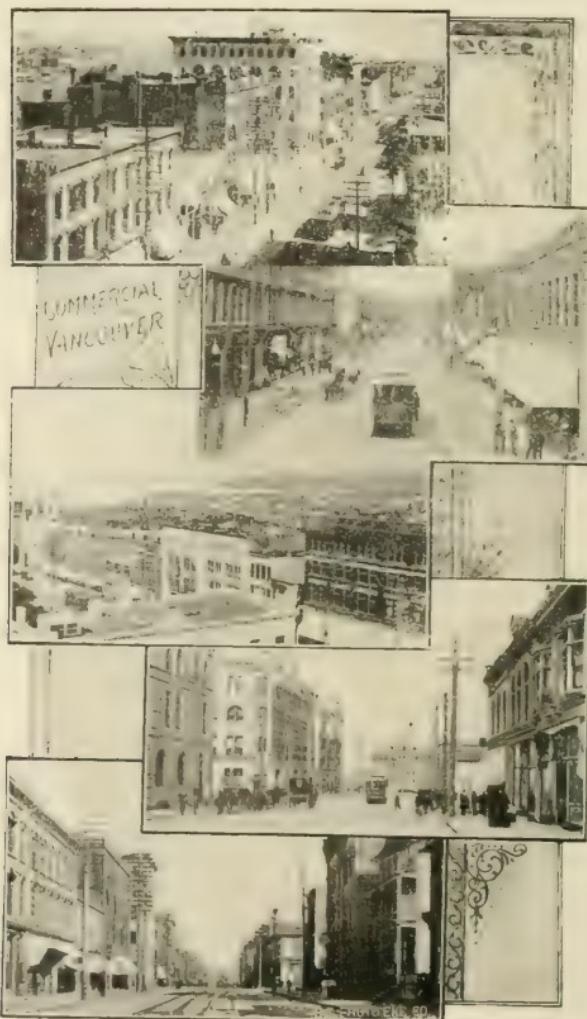
## VANCOUVER.

BY A. J. BAXTER, ESQ.,

Secretary Vancouver Traveler's Association.

The entrances to Vancouver are all marked by that extravagance of scenic beauty which is the pride and glory of the West. Whether one comes from the south, through timbered undulations 'mid which rippling rivers run to the sea, or across the great Rockies where peaks, snow-capped perennially, are rigid in their last mighty effort to pierce the far-off heavens; or by the sea, from which voyage is made through numberless islands and picturesque channels—all routes are similar, in that they prepare one for what is to be seen from this modern city on the shores of the western sea. Vancouver, reached by trans-continental railways and trans-Pacific and coast-line steamers, offers rare inducements to him who would commune with nature. A visit here is well worth many times the cost, and the experience a dream to be cherished in the memory, a pleasing and delightful recollection for ever after.

One hundred and ten years ago the site of the city was first seen by that intrepid voyager after whom Vancouver is known. It marks the place where he anticipated his greatest discovery.



that of the north-west passage to England through Burrard Inlet. To-day it is the most northerly city on the Pacific coast, from where departure is made to the icy Yukon, the land of gold, great green glaciers and mysterious mirages.

## ATTRACTI0NS FOR VARIED TASTES.

The interior of British Columbia, where agile mountain goats inhabit the lonely ozone heights, and other of the big game animals abound, is reached from here. To him who seeks the quiet



haunts of inland streams, and lures the gamey trout from the laughing waters, there are abundance of creeks and rivers to tempt him away. The mild mannered shooter, who uses the gentle kodak, can obtain magnificent perspectives and entrancing views of woodland and water at any distance from the city. To

the stout climber of heaven kissing hills opportunities are offered within a day's journey. And to him who seeks rest and prefers cool retreats away from glaring thoroughfares there is Stanley Park, the 1,000 acred reserve, with its winding pathways, secluded arbors and inviting shades. Located adjacent to all street car lines, it is a favorite resort to the young, who may romp unrestrained, and to the old, who love peaceful seclusion.

From the road which skirts the sea, on the western limit of the park, can be seen on an evening in July the multitude of sails



Wrecked salmon fleet, Prospect Pond, Vancouver, B.C.

of the salmon fishing fleet as they lie on the smooth surface keeping guard over their nets. This is a sight rarely equalled. At the hour when daylight dies, this archipelago of canvas is stretched from shore to shore, and extends far into the vanishing distance. Their number is doubled by the mirroring waters, and as the twilight deepens, light after light glimmers into the increasing darkness, and in the night brightly burn as beacons for the guidance of the passing steamers. This flotilla is only a small portion of the fleet which reaches all along the Gulf of Georgia, and may be seen on any evening from June to near September.

## AN UNRIVALLED PICTURE.

Steveston is the home port of the fishermen. At the docks of that town, which is a respectable city during the fishing season, and in the vicinity, some 4,000 boats tie up. The departure of these on a Sunday evening, when all cast off together and hie away to the salmon grounds like a huge bird spreading its wings and sailing away, the retreating king of day beckoning it into the west, as it were, is beyond description, and almost surpasses the limits of the imagination. Numbers of people leave Vancouver by the special service provided by the Canadian Pacific Railway and view this unequalled sight.

While there are no others so uniquely picturesque, there are many places in the vicinity of the city quite as interesting. Just across the inlet of the sea, which forms a harbor equalling the



famous haven of Sydney, Australia, lies the quaint Indian mission. Its white painted houses are prettily situated on the margin of the water. Here the Coast Indian can be viewed to better advantage than at any other place. Order is maintained in the settlement by Chief Harry himself, who has jurisdiction within his own little kingdom. This is also the residence of the hermit, Mellis Hennius, whose record of bravery was transmitted to Rome. There are many links here between the present and the past, and none more interesting than the graveyard, where the registers of existence are inscribed with a single name, probably bestowed by some French priest in the days gone by. The mission is a suburb of the city, with three miles of sea intervening.

Beyond, the nearest of the mountains rise from the shore,

with their heavily wooded sides, and scars where slides once tore away the covering to the foundation rock. Here the snow lingers till the latter end of the summer, and the clouds, fresh from the sea, rest ere they journey inland. On Crown Mountain, which can be reached after a six hours' climb, is the crater of an extinct volcano. Adjacent are the peaks known as the Sleeping Beauty—so-called from its fancied resemblance to the heroine of the fairy tale—and Grouse Mountain, which receives its designation from the numerous flocks of the fowl of that name which inhabit its slopes.

#### CITY'S WATER FROM MELTING SNOWS.

In the valley below is the wonderful canyon of the Capilano, where the precipice is sheer for 250 feet, cut by the cleaver of a



Lakes on summit of Mt. Crown.

gigantic convulsion. Here one may see the giant Douglas Fir clinging to the rocks at the base, and stretching upward with its 150 feet of length, in a faint endeavor to attain the top. Farther up the valley, and reached by bicycle or horses, over a winding roadway, is the source of the water supply of Vancouver, obtained from the melting of the unsullied snows. Over the range is another valley, and the small river which rushes and tumbles through the rocky rifts finds its beginning in a glacier, which is a comparatively short distance from the city.

On the shore, a wide margin has been left by the mountains as they retreated to their rocky fastnesses. Here is the nucleus

of another city, which is now the resort of campers and other summer residents. This is but one of the many places offered to those who wish to spend an outing. Near to the city are the sea beaches, and along the coast, varying in distance from three miles to one hundred, is place after place, each with accommodation for the holiday seeker, and every advantage for outside enjoyment. Fishing, boating and hunting in season can be obtained almost at the doors of the convenient hotels located on both islands and mainland.

Inland from Vancouver are the small towns on the banks of the turbid Fraser—the remnants of the mushroom villages which sprang up with the exciting rush to the unknown golden Cariboo in the early sixties. The earliest city of the province, New Westminster, is reached by a three-quarters of an hour ride on the electric railway from Vancouver. Here forty years ago was a city of 5,000 inhabitants, and to-day the starting-point of the rushing gold seekers is a prosperous city, quietly resting after its youthful excitements. Here, too, is to be the bridge to span this mighty river, a construction which will rank among the greatest of the continent.

#### A PANORAMA OF BEAUTY.

The whole western country is a panorama of beauty and a scene of bustle. Bordered by mountains and ocean, its salubrious atmosphere singing with the purling of short-lived streamlets, and echoing with the roar of mighty rivers, its slopes wooded with fir and cedar, it offers a delightful paradise which conjures the eye with its rough and rugged beauty and charms the soul with its bold and heroic sublimity, interspersed with wild and limitless glories.

Great in its possession of unlimited resources, with its wealth of products of mine and sea and forest, it is the centre of the future commercial activity of the world. And Vancouver, mid-way between the hemispheres, the point of egress from the new and the entrance from the old, stands amid its unsurpassed surroundings, the coming metropolis of the northern Pacific Ocean.



## VICTORIA, B.C. AN OUTPOST OF EMPIRE.

BY HERBERT CUTHBERT, ESQ.,  
Secretary Victoria Tourist Association.

The people of Eastern Canada until quite recently seemed to be of the opinion that Canada consisted of Ontario, Quebec, and the Lower Provinces. They almost ignored the Greater Canada, that vast empire which lies to the west of Lake Superior and to the east of the Rocky Mountains, in which there is room to place every man, woman and child in the United States and give them each an acre of the best agricultural land, and then have as many as three acres each of good cattle land to spare. As for British Columbia, it was never taken seriously; in the Eastern mind it was almost an unknown region. They used to say of British Columbia that it was nothing but a sea of mountains, broken by forests and rivers. Well, what they said in derision in days gone by we are proud to acknowledge to-day, for the banks of those rivers have been literally lined with virgin gold, and from their depths there has been derived a product that has yielded millions of dollars annually to the people of the province. Those magnificent forests have contributed and will continue to yield immense wealth when generation after generation has passed away, and the forests of other and older countries have ceased to exist, and those mountains—those glorious, sublime mountains—are

God's treasure-houses, in which he has stored a wealth of minerals, of coal, of iron, of copper, of silver, and of gold that will take centuries of toil to extract, and will provide employment for countless thousands now unborn. And lying at the foot of these mountains, nestling between these forests and the mighty rivers, are many beautiful valleys, from whose virgin soil will spring the means of sustenance for the future inhabitants. And this combination of mountain, forest and stream has been so laid out by the Almighty Architect that the whole 400,000 square miles



A Charming Day past the Valley of the Rockies.

is one vast amphitheatre of scenic grandeur that is the wonder of the world.

However, the past three years have seen a great change in the attitude of the East to the West, and in the conception which the best-informed citizens have of the value of this truly great West to the Dominion as a whole. It is in the West that they realize they have a market for their manufactures, and that in the development of the West lies the future prosperity of Canada. True, this feeling is confined chiefly to the middle West, British Columbia still being very badly neglected by the Easterners.

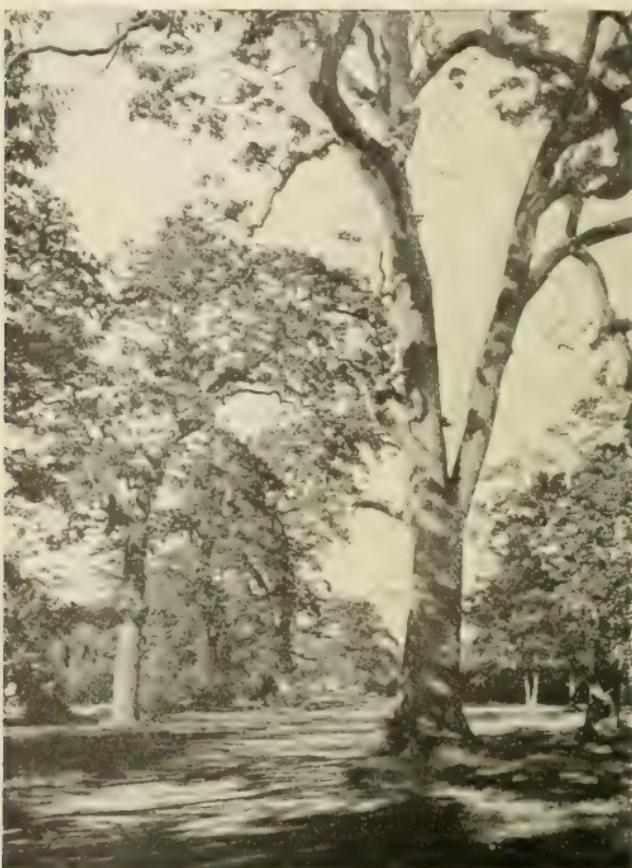
The trip of the Canadian Manufacturers last year, however, did a great deal to remove many erroneous impressions and to create an interest in British Columbia that will do a great deal of good, and which will, without doubt, help to create a more adequate idea of the enormous national importance of Canada's western seaboard. And it is about time that British Columbia did receive a little recognition from the East, that Canadians did realize that this province is, on the Pacific, what the whole of the Maritime Provinces of the East are on the Atlantic, to the Dominion. How it has been possible to ignore it so completely in the past is a marvel, comprising, as it does, 480,000 square miles, possessing a climate unequalled in the rest of the Dominion, rich in minerals, timber and fish, and other natural resources, abounding in large and small game of all kinds and in game fish, the scenic wonderland of this vast continent, the outlet to the Orient for all the trade and commerce not only of the Dominion but of the Empire (the future of the shipping possibilities it is impossible to estimate), it is difficult to understand how it is that the manufacturers, the capitalists, and the politicians of the East should have failed for so long to realize its paramount importance and value and its ultimate destiny.

The most important factor in dispelling this antipathy is in getting the Eastern people West, so they may see for themselves what the country really is, and therefore we hail with satisfaction the prospective tour of the members of the Canadian Medical Association.

The most western city which these delegates will visit is Victoria, the capital of British Columbia, the Ever-Green City of Canada, and, without doubt, the most beautiful and interesting city on the Pacific coast. For many years the history of Victoria was the history of British Columbia and Western Canada, and many historical scenes and events of grave importance to the Empire have been enacted there. The terms of confederation with Canada were made by her representative citizens, and Victoria has every reason to be proud of the public men who in years past guided her destinies and those of the province of which she forms a part. Victoria has grown steadily until she is now a city of nearly 30,000 people, with splendid public buildings, paved streets and sidewalks, beautiful parks and recreation grounds, electric lighting and street railway systems, costly and efficient sewerage, and possessing more hotel accommodation for strangers and visitors than any city in Canada west of Toronto. It is here that the only British Naval Station on the Pacific is situated and



which gives her the name now almost universally applied, "An Outpost of Empire." Should any trouble with Great Britain arise out of the present unfortunate war in the East, Victoria will be the centre of stirring events and of almost universal interest. This naval station is at Esquimalt, a suburb three and a half



miles from the centre of the city, and is naturally of great interest to visitors. There is a large dock yard, containing engineering and repairing works, ammunition magazines, warehouses and ship stores; while immediately adjoining is the immense dry dock, with the large coal bunkers and vast stores of coal always up to war strength. The harbor is sheltered by the point upon

which the dock yard is situated, and is very picturesque, and there are always some of the war-ships in port. The harbor and dry dock are protected by strongly fortified forts which are scattered over several miles of the surrounding country.

Of course the development of the natural resources of British Columbia, and particularly of Vancouver Island, will add very materially to the prosperity of Victoria. It is, however, as a residential and tourist, as well as a commercial city, that she is now getting a world-wide reputation, and whatever time a visitor to the province spends in other cities, he always desires to spend double in Victoria.

It is impossible to describe the natural scenic attractions of



Victoria, many globe trotters having declared that it is the most beautifully-situated city in the world. But perhaps it is better to take the description of these features of this "Outpost of Empire," from a stranger rather than one from a resident. The Rev. P. M. MacDonald, of Toronto, publishes in his little book, "Letters from the Canadian West," the following:

"In this old city you can see the frequent Englishman. The military air is around you. The soldiers of the King and the sailors, too, walk the streets. The bugle call sounds on the evening wind. The measured step and easy pace of John Bull are noticeable.

"Victoria is the City of the Rose. White and red varieties in unimaginable profusion grow here on the Coast. The first

season (in June) is just passing, and the lawns are carpeted with pink and white petals. The second season comes when our autumn winds are wailing about the winter's approach. Here they pluck the new-blown rose on Christmas Day from the vines that clamber up the side of the house and peep into the living rooms through the open window. This is Canada that Kipling miscalled 'Our Lady of the Snows.'

"The view of the Straits of San Juan de Fuca, with the Olympian range and majestic Mount Baker eternally capped with white, in the distance, is one never to be forgotten. The tourist has found out this clean, quiet city and his tribe is on the rapid increase.

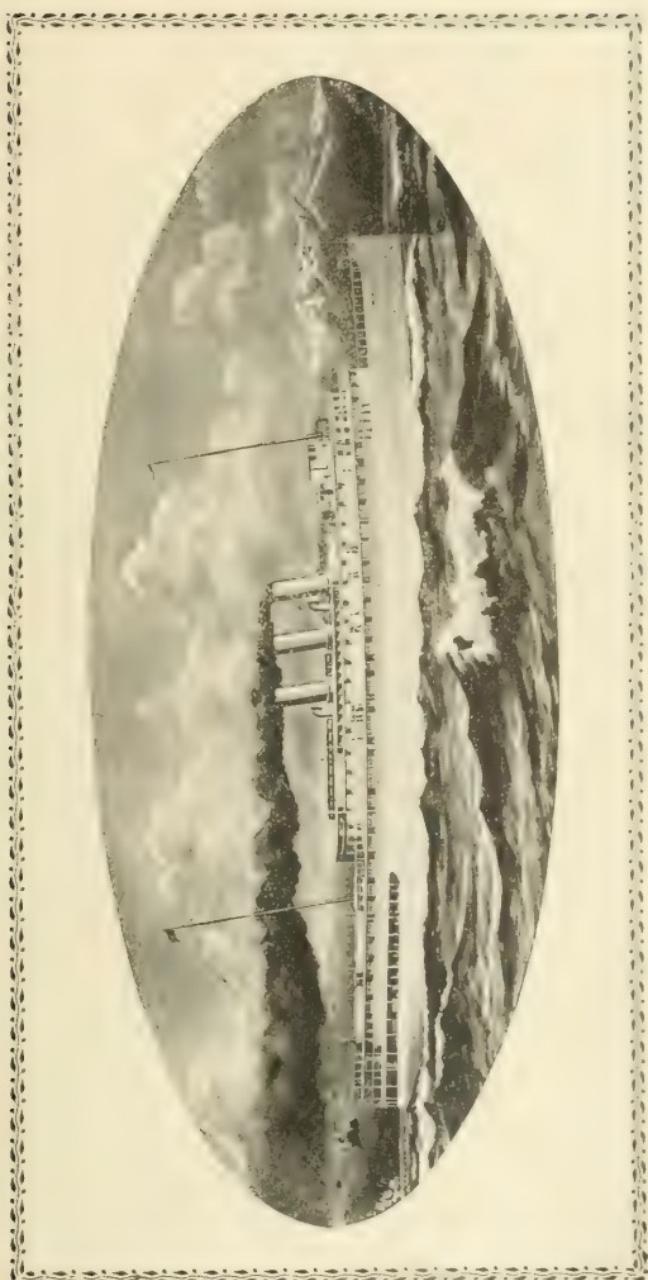
"Victoria's citizens are healthy and wealthy and wise; though they may not plead guilty to each of these charges. They are healthy because they can 'go'; and they are wise because they 'go slow.' They are proud of their city—small wonder—and they cannot see why all the Vancouver folk do not sell out and come to Victoria.

"The city has a very rich country behind it. Vancouver Island has great mineral wealth. On the West Coast, cinnabar is found in abundance, and at Alberni gold has been discovered. The timber of the country is very large and fine; the big Douglas fir and the mammoth cedar, centuries old, are waiting for the logger and his axe.

"Vancouver Island, in the neighborhood of Victoria, is peculiarly well suited to fruit-growing. Every variety of fruit grown in temperate climates attains to a wonderful excellence, and in this line the prospects for great development are very bright. The moisture and the mildness of the climate make the Coast and the Island almost tropical in regard to vegetation; in the Lig woods, ferns and undergrowth form a veritable jungle.

"Victoria has a thing of beauty and, they hope here, a joy for ever, in the Parliament Buildings. Both in form and finish they are unsurpassed in Canada, which, of course, is a large statement, but a correct one."

Such is Victoria, Great Britain's most western outpost of Empire. Her climate in summer is perfect, and in winter is very similar to that of England. A large number of Eastern people, tired of hard winters and hot summers, are becoming permanent residents of the city, and it is safe to say that an era of prosperity is now dawning that will make her in a few years not only the most beautiful and the most healthy, but the most prosperous for her size, of all the cities on the Pacific coast.



## Therapeutics.

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### **The Treatment of Whooping Cough.**

Louis Spitz, in *The Therapeutic Review*, summarizes the various remedies that have been employed in this obstinate affection. Antipyrin given in doses of from 1 to 3 grains every 5 hours, will nearly always decrease the number of paroxysms, but not the severity of each attack. Solution of quinine, 1 grain to 1 ounce of water, applied to the pharynx by means of a spray, is useful to allay symptoms as well as for a prophylactic measure. Tincture of belladonna and nitrate of amył have been employed with good results. Benzine by inhalation has benefited some cases, and the French have administered it internally in this condition in doses of from 10 to 15 drops. But this is not to be recommended." Madison Taylor, of Philadelphia, states that relief is almost immediate from hot poultices applied to posterior surface of lungs. C. G. Kerby has made comparative studies of 752 cases, and he believes that antipyrin controls the paroxysms better than any other drug employed. Brilliant effects are claimed for aristochin, a tasteless quinine preparation, by numerous German physicians, a cure often being noted in from one to four weeks, the effects being especially noticed in children under one year. Martindale's emulsion of bromoform is as follows:

R. Bromoform .....	$\frac{1}{2}$ fluid dram.
Tinct. senega .....	$3\frac{1}{2}$ fluid dram.
Syrup of orange.....	$\frac{1}{2}$ ounce.

M. Shake and gradually add water to 6 ounces. Sig.: Dose, 2 to 4 drams.

S. Henry Dessau believes that mild cases of the disease will end in a short time, no matter what the treatment; in severe cases it is often very difficult to find any drug to prove effective.

### **The Treatment of Typhoid Fever as Carried out in Johns Hopkins Hospital.**

McCrae (*The Practitioner*, 1904, Vol. LXXVII., p. 161) believes that typhoid fever can be much more satisfactorily treated at a hospital than in the patient's house. Not only so far as the patient is concerned, but because of the danger of spreading infection is much diminished. He describes the treat-

ment carried out in Prof. Osler's clinic in the Johns Hopkins Hospital as follows:

The diet is of milk and albumen water, of the former of which the patient receives four ounces diluted with two ounces of lime water every four hours; of the albumen water he receives the white of one or two eggs in four ounces of water flavored with lemon or orange juice, every alternate four hours. In patients with whom milk does not agree, some of the modifications, such as buttermilk or koumiss flavored with vanilla, or some similar preparation may be employed. Their patients are allowed tea or coffee, or cocoa, as well as ice cream, at any stage of the fever. Bouillon and similar preparations are sometimes resorted to, but not often. The beef tea preparations and peptones are never used. A point of great importance in connection with the diet, is to see that the patient gets a sufficient amount of water. The rule is that every patient shall receive at least three quarts of fluid in 24 hours, while some of them take as much as twice this quantity.

The hydrotherapy is employed from the beginning. He does not believe that the main object of the use of the cold bath is the reduction of temperature, but on account of its effect on the nervous system and the stimulation to the circulation. The rule as to tubbing is that the patients are tubbed every three hours when the temperature is 103.5 degrees or above. The water is from 70 to 85 degrees, and the bath lasts from 15 to 20 minutes. It is advantageous to commence the bath with a higher temperature, after which the temperature of the water may be reduced as the patient becomes accustomed to the mode of treatment.

No purgative is employed during the febrile period, a state of constipation being considered desirable. If necessary the bowels are moved every second day with some simple enema, occasionally in conjunction with an injection of oil. If diarrhea occurs the diet is reduced, the milk being cut off and the looseness of the bowels controlled with bismuth or lead and opium. For tympanites, turpentine, either externally or internally, is employed. Much attention is given to the condition of the mouth, the patient being made to cleanse the mouth after each feeding, either with a dilute solution of carbolic acid or a saturated solution of boric acid.

As for drugs, none are used routinely. Alcohol is given for the extreme toxemia and failing circulation, and for weakness of

the pulse, strychnia and digitalis are employed hypodermically. Intestinal antiseptics are never administered.

In the convalescent period, solid food, in the form of scraped beef or sweetbread, is allowed on the 10th day. The patient is allowed to sit up in bed the same day and allowed out of bed in a wheeled chair three or four days later.—*The Therapeutic Review.*

#### **Pruritus Ani.**

In those interesting cases of pruritis ani, Tuttle (*American Journal of Dermatology*) where sleep is impossible, prescribes the following:

R. Ac. carbolici.....	ʒii.
Ac. salicylici.....	ʒi.
Glycerini.....	ʒi.

The patient should apply this about the anus and up within the anal canal once or twice during the night, in order to give him rest. Tuttle further states, where the disease is due to parasites or infection of the hair follicles, this remedy may be curative as well as palliative.

#### **For Bites and Stings of Insects.**

John V. Shoemaker employs for these:

B. Infusion of digitalis.....	ʒii.
Spirit of nitrous ether.....	ʒii.
Brandy.....	ʒii.

M. Dose, one to two teaspoonsful in water every two or three hours.

#### **The Treatment of Pneumonia.**

R. S. Thornton, Deloraine, Manitoba, in *American Medicine* discusses the different points in the treatment of pneumonia. Rest is the chief indication, general as well as local, which means the avoidance of any muscular movement calculated to lay strain upon the heart muscle. Patient should not be allowed to sit up for food, or to get up to void urine or empty the bowels. Then there should be no talking to the patient by sympathetic friends. He advocates the employment of poultices up to the time of consolidation, when they should be discarded. After these the cotton jacket is to be used. Restlessness, sleeplessness, delirium and cough are to be relieved as far as possible, and he recommends for this  $\frac{1}{6}$  grain morphia. If further pain de-

mands more, codein is preferable. He enters a plea for the employment of the active principles rather than the uncertain tinctures and extracts. For many years Thornton has abandoned whiskey and brandy in these cases, and believes we have as satisfactory stimulants in the carbonate and the aromatic spirits of ammonia.

#### **The Formalin Treatment of Laryngeal Tuberculosis.**

L. B. Lockard, Denver (*Colorad. Med. Times*, Nov., 1903) considers formalin to be more generally applicable and effective than any other remedy for laryngeal tuberculosis. Besides its pre-eminent germicidal effect is another hardly less essential, its absorbent or shrinking power upon hyperplastic tissue.

It is also pointed out that while formalin is positively germicidal in strength of 1 to 75,000 locally in the larynx, without any inconvenience other than momentary smarting, which can be controlled by the previous use of cocaine, we can use solutions as strong as 1 to 50. As to its prohibitive action upon secondary invasion there can be no question. The remedy has been condemned by some who have neglected to remove vegetations and infiltrations surgically. Lockard has seen several cases where complete cicatrization has followed the use of formalin upon extensive ulcerations of the epiglottis, so often considered hopeless. Another property of the remedy is its power of producing anesthesia.

Almost every observer who has reported against it has used it inefficiently.

Lockard advises daily or at least tri-weekly office treatment with a spray of one-half per cent., and vigorous rubbings with a 3 to 10 per cent. solution, depending upon the degree of involvement and the susceptibility of the individual. In addition to these daily treatments, a spray of one-half per cent. solution should be used at home three or four times a day, so arranged that the intervals are never more than three or four hours.—Abstract by Eaton in *The Laryngoscope*.

#### **Eczema of the Palms of the Hands.**

The following combination has been recommended to the Therapeutic Department of *The Journal* by Dr. C. C. Gentry, of Antrim, Pa., in the treatment of eczema of the hands, especially eczema involving the palms of the hands. Although our attention has not been previously called to a similar combination,

it deserves attention on the recommendation of Dr. Gentry. The formula is as follows:

R. Formaldehyde (40 per cent.).....	g. x-xv.
Petrolati.....	3 <i>l.</i>

M. Sig.: Apply thoroughly night and morning.

J. A. M. A.

#### Notes on the Therapy of Acetanilid.

J. R. Johns, in *American Medicine*, gives these points on the therapy of acetanilid: Acetanilid is most frequently employed as an analgesic. Too large a dose is quite generally stated in the literature of acetanilid. The dose ranges from 2 to 8 grains, with a maximum of 30 grains for the 24 hours. Ten grains at a dose is probably never necessary. While the combination with caffein is no doubt a good one, partiality is shown for one with monobromated camphor, which is found in all tablet lists.

Acetanilid is particularly inimical to morbid reflexes in the sensory sphere. Small doses, 1 to 2 grains (less than 1 grain in children), produce a sense of ease and quiet within. The effects of acetanilid upon the nervous system are sedative, analgesic, antispasmodic, antipyretic, and antiperiodic. In addition to being beneficially palliative, these effects are in a large measure also curative. Acetanilid is our best remedy for the relief of pain not due to local inflammation, reflex pains, etc., the cries of nerve centres, the fury of nerve storms, the dyscrasia of the sensory nervous apparatus.

Its use is indicated in the pains of tabes, gastralgia, functional dysmenorrhea, sciatica, rheumatism, neuralgia, migraine, etc. Acetanilid is a valuable adjunct, as a modifier of action, to such remedies as quinine, the salicylates, opium, and calomel. The value of acetanilid in combination with calomel in the treatment of acute and subacute maladies in children cannot well be overestimated. I know of no condition in which small doses of calomel, with or without sodium bicarbonate, are generally used in which acetanilid could not be advantageously combined in the treatment.

There are two instances in which acetanilid is the best drug to employ: 1. When the indications for treatment are not clear; when you do not know what to give—give acetanilid. 2. When only the psychic features of the case demand drug treatment give acetanilid in 2 grain doses. It is as harmless as any placebo, and may be depended upon to produce a favorable mental effect.

# Dominion Medical Monthly

And Ontario Medical Journal

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## WINNER IN PRIZE COMPETITION.

Robert Macdonald, A.B., M.D. (University of New York Medical College, 1894), New Glasgow, Nova Scotia, is the successful contestant in the DOMINION MEDICAL MONTHLY Prize Competition. His paper appears on page 311. The article was written over the *nom de plume* of "Experience is Fallacious, Judgment Difficult."

## TO VANCOUVER AND VICTORIA.

In this issue are presented several views of the cities of Vancouver and Victoria, the Mecca of Canadian doctors during August. There are also photos of several members of the Executive who are exerting themselves on behalf of those members of the Canadian Medical Association whose purpose being in attendance at the thirty-seventh annual meeting of our national medical organization. The opportunity to visit the Coast in company with fellow-practitioners from all the provinces should not be considered lightly. It is one which may not present itself

again in a good many years. Flatly, the cost will be about \$150 for the trip, and the time away from practice may be made to be either two weeks or two months. There will be a very attractive programme, both intellectual and social, which will probably surpass anything yet done at any of these annual meetings. In addition to a number of eminent Englishmen being present, there are going to be in attendance from the United States, men of world-wide repute; and the papers and discussions will, therefore, be of a high order. Many prominent Canadians will also contribute, and the appearances now are that the Vancouver meeting will go down in the history of Canadian medicine as the greatest gathering of physicians and surgeons of our Dominion. So far, some one from every province seems likely to be present. Quebec, Nova Scotia, and New Brunswick are going to be especially well represented. If these far-off provinces can send good delegations, surely Ontario, Manitoba, and the North-West Territories will arise to the occasion and send delegations worthy of these provinces. This meeting is going to be a record breaker, and you cannot afford to miss it.

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#### HOW TO TAKE CARE OF BABIES DURING HOT WEATHER.

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Although the hot weather seems doubtful of arriving this season, nature at any time is capable of playing strange pranks, and "fore-warned is fore-armed." This is what the City of Rochester, N.Y., is doing, anyway, whose Health Department has distributed a concise circular entitled as above. Amongst the practical points prominently placed therein and emphasized, are the following: "No other food, not even a wet-nurse, can take the place of milk from the child's own mother." "Give the baby water." "Give it pure air, day and night; give it no food but mother's milk, or that directed by the physicians; when it cries or is fretful, do not offer it food, but give it water; be sure that it gets enough sleep, two naps during the day at least; do not put too much clothing on it; bathe it in a tub every day; don't handle it; let it alone." "FEED IT BY THE CLOCK," (written large). "Never let the bottle stand with milk in it. Never use a bottle with a long rubber tube."

These are suggestions which the medical attendant should

press well home, particularly to those relating to the giving of water and feeding by the clock. As is well known, mothers and "experienced" nurses are too prone to neglect these most important and vital regulations of the child's alimentary life. More harm probably arises through irregular feeding and satisfying of thirst with milk rather than water than in any other particular in the baby's life. To show the steadfast faith people have in their own ability to properly bring up babies, an illustration may be cited. A doctor was once expositing with a foster mother on the feeding of a baby under her charge, when her father joined in: "Feed it whenever it cries; let it have plenty whenever it cries for it. I've raised a bigger family than you ever will." "How many have you raised?" "Fourteen." The doctor protested, and said he didn't care to have the personal experience and luck of the old man. Not much use arguing the point under such circumstances. But it is truly remarkable how some families thrive in squalor and grow to manhood under such adverse circumstances. Of course, where there is one such instance there are dozens and hundreds to the opposite side of the account. A good bit of the trouble comes from the crying, and the desire for peace and quietude. This is good exercise for the child's lungs but a signal for stomachic engorgement. Here the trouble often begins, and where it is important to give some water instead of milk.

Prevention of intestinal infection in summer-time in the life of the baby, coincident with the rise of temperature at that period, is a problem which concerns the successful family physician very much indeed; and it should be the rule by the accoucheur to write out at every confinement a set of regulations for the guidance of the mother as concerns the proper care and feeding of her offspring.

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#### CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

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It is because a good thing should be talked about, written about, and commended, that we beg to draw the attention of our readers once again to this most worthy organization. The annual fee of \$2.50 is not by any means excessive for the protection accorded. The reason why the great majority of our profession is not in membership, is probably in great part due to neglect; and, no doubt, the medical press of the Dominion

could do a great amount of good in keeping the name and objects of the Association constantly before their readers. Again, it is especially interesting to draw attention to our own organization at this time, on account of the effort being put forth in England to incorporate medical defence under the guidance and administration of the British Medical Association. For several years two different organizations have been promoting medical defence in England, viz., the Medical Defence Union, and the London and Counties Medical Protective Society, Limited, and both have done much good work. The powerful influence of Sir Victor Horsley is now behind the scheme to have all this done by the British Medical Association. He has placed himself on record as follows: "I would therefore suggest to you that if you want to get machinery of the greatest power, the wisest thing for you to do is to take the British Medical Association, and to make that your machine, and to organize it for the purpose of medical defence." The Medical Defence Union has a membership of 5,800, 1,600 of whom are not members of the British Medical Association, some of them being dentists, who are not eligible for membership in the British Medical Association, which organization now numbers some 19,000. As with our own organization, those governing these defence organizations are members of the national medical organization, Sir Victor Horsley, himself, having been at one time President of the Medical Defence Union. Whilst the Canadian Medical Protective Association was founded under the auspices of the Canadian Medical Association, the two are entirely distinct; but probably nearly all of the members of the former are members of the latter. Since its organization, the Protective Association has done admirably good work, and has conducted several cases against its members to a successful termination. On this its executive officers are to be congratulated, and certainly should be generously supported. We do not think they should be left alone to prosecute the success of the organization, but every member thereof should be constantly pressing upon non-members the importance of becoming connected therewith. And the medical press of the Dominion can do a great deal of good in this direction by timely references thereto. In three months' time the next annual meeting will be held, and we express the hope that the president, Dr. Powell, will be able to lay on the table a most encouraging report. If you have not joined, why not join now?

## Editorial Note

W.M. R. WARNER & Co. have an interesting exhibit at the St. Louis Exposition, located in the Palace of Liberal Arts, and, inasmuch as no general information is given out as to where pharmaceutical and chemical displays are shown, they have thought it would be of general interest to our subscribers to have the fact laid before them, not only as to their particular exhibit, but the class generally.

## NEWS ITEMS

DR. ANDERSON, London, has been appointed assistant house surgeon at St. Joseph's Hospital.

DR. STERLING, of Alvinston, has located in Windsor, having formed a partnership with Dr. Carney.

DR. N. J. AMYOT, of Belle River, has been gazetted an associate coroner for North Essex, in place of Dr. J. O. Reaume.

DR. J. M. MOORE, formerly of Brussels, and who sold his practice at Moorefield, has located at Carthage, Perth County.

DR. W. S. TURNBULL, Goderich, who has been taking a post-graduate course in medicine and surgery, has returned to his home.

DR. ARCH DICKSON, of Goderich, has returned from New York and has gone to Winnipeg, with the intention of locating in the West.

DR. C. T. NOECKER, of Waterloo, has gone to New York City where he will spend a month in the leading hospitals and will take a special course in surgery, eye and ear.

DR. W. F. BABB, who has been for the past year one of the house surgeons at St. Joseph's Hospital, London, has been appointed to be chief resident surgeon of Victoria Hospital in the same city.

DR. CHAUNCEY COKE, who has been engaged as ship surgeon on the Elder-Dempster line of steamers, plying between England and the west coast of Africa for the past two years, has returned to his home at Watford.

DR. JNO. G. GUNN, a graduate of the Western Medical School, has been appointed clinical assistant at the London Insane Asylum. The doctor is a son of Dr. Gunn, of Ailsa Craig, and is a well-known figure in London athletic circles.

DR. DAVID SMITH, who has been engaged in very successful practice with his cousin, Dr. McWilliams, of Thamesford, for some months past, has gone to the Old Land, where he will take a post-graduate course in medicine and a special course in hospital work.

SERUM FOR TYPHOID AND TUBERCULOSIS IN MONTREAL.—Dr. de Martigny has been requested by the Hygienic Committee of the Montreal Civic Council to secure some of Dr. Chantenesse's serum for typhoid fever as well as some of Dr. Marmorek's.

DR. HARRY J. WATSON, Trinity '96, who for the past three years has been a surgeon in the U. S. Army in China and the Philippines, has resigned his commission and opened an office in Winnipeg, Man. Dr. Watson was the only Canadian doctor in the U. S. Army, and went to the relief of Pekin with the allied forces in 1900.

QUEEN'S MEDICAL FACULTY AND THE FIFTH YEAR.—It is understood that Queen's will try to persuade the Ontario Medical Council to make a change in the regulations regarding the fifth-year course, to the effect that any medical graduate may be entitled to try the final Council examination, who has been a house surgeon for one year, or has served a year with a qualified practitioner, or has attended clinics in a recognized hospital for at least one year.

SCHOOL OF NURSING IN MUSKOKA.—A school for nurses-in-training has been opened in connection with the Muskoka Cottage Sanatorium, Gravenhurst. With the growth of the institution of the National Sanatorium Association this has become a necessity. The step is welcomed by the medical profession, as they have always many patients who are afflicted with tuberculosis. Lectures are given by the physician in charge and the nurse in charge, supplemented by special lectures that will be given by leading physicians in Toronto and elsewhere, who are on the consultant staff of the association, making the two years' course a very complete one. A number of probationers have entered the work within the past month.

MONTREAL GENERAL HOSPITAL.—During the first quarter of the present year there were treated to a conclusion in the wards of the Montreal General Hospital 754 patients. Of this number, 69 died; 19 of the deaths occurring within three days after admission, thus making the mortality rate 6.6 per cent. In the out-door departments there were 9,204 consultations, an increase of 244 over the corresponding quarter of 1903. During the quarter, the hospital has thoroughly equipped an X-ray and electrical laboratory at a cost of \$1,250. The site for the new contagious diseases hospital in connection with the hospital has been secured, and the required amount for building will be \$150,000, of which only \$35,000 has as yet been subscribed, Sir William Macdonald contributing \$15,000. Dr. John McCrae has resigned as resident pathologist, and Dr. D. B. Gillies appointed acting pathologist. The term of Dr. W. G. Turner's engagement as medical superintendent expired on the 1st of June and Dr. Roland P. Campbell has been appointed to succeed him.

CONSUMPTIVE SANITARIA.—At a meeting of the Executive Council of the Canadian Association for the prevention of consumption and other forms of tuberculosis, a committee, consisting of Dr. Bryce, convener; Dr. Lafferty, Calgary; Dr. Fagan, Victoria, B.C.; Dr. Hodgson, Toronto; Dr. Gordon Bell, Winnipeg; Rev. Dr. Hamilton, Bishop of Ottawa; Sheriff Sweetland; Mr. G. H. Perley and the secretary were appointed to take steps to secure the co-operation of municipalities and of the governments of the several provinces, and of the Government of the Dominion for the establishment of one large sanitarium in each province for the treatment of consumption. The secretary was directed to visit Prince Edward Island, Nova Scotia and New Brunswick in August and September, with a view to lecture upon the cause and prevention of consumption, and to lecture in such places in Ontario as might be deemed advisable during June and July, and finally a committee of all the members of the Executive Council resident in Ottawa, and such other persons as they may associate with themselves, with Dr. Small as convener, was appointed to take immediate action for the purpose of organizing a branch of the association in Ottawa with a view to immediate and energetic action, in co-operation with those who have already moved in the matter of the establishment of a sanitarium for Ottawa and the surrounding country.

## Special Selection

### IRREGULAR MENSTRUATION AND TREATMENT.

BY E. C. WILLEA, M.D., LOUISVILLE, KY.

Practitioners of medicine are consulted by no class of patients who display greater solicitude than those who have amenorrhea.

In the popular mind failure of the menses to appear is supposed to be due either to pregnancy or tuberculosis, and either may cause a degree of anxiety that is truly intense.

The term amenorrhea is used to mean the total absence of the menstrual discharge, or a marked deficiency in the quantity of the flow. Amenorrhea may be physiological or pathological. During pregnancy the absence of the menstrual discharge is, of course, physiological and demands no consideration in this article. When pathological, the causes of amenorrhea may be said in general to be due to the following:

- (1) Taking cold, at or near the menstrual epoch.
- (2) Severe mental perturbation, as fright, sorrow, or great elation of spirit.
- (3) It may be symptomatic in several affections, as tuberculosis, anemia, chlorosis, syphilis, typhoid fever, nephritis, pelvic peritonitis, and other morbid conditions.
- (4) Obesity.
- (5) Luxurious life, or overtaxing the nervous system.
- (6) Stenosis or atresia of the cervical canal, or imperfect development of the tubes, ovaries or uterus.
- (7) Vicarious menstruation may make the condition obscure, there being a discharge at the regular monthly periods from the nose, lungs, bladder, stomach, nipple, or other part.

The treatment of amenorrhea must comprehend attention to general considerations, and special indications must be remembered at the various expressions of amenorrhea.

The treatment must, in a word, comprehend remedies and measures which are indicated by the etiological factors present in every case which comes up for treatment. When the amenorrhea is caused by having contracted cold, the patient should have a warm sitz bath, and hot applications should be applied to the abdomen and thighs. Often a hot vaginal injection will serve a most useful purpose, and a laxative, preferably a saline, will greatly aid in bringing on the flow.

In amenorrhea, delayed menstruation and dysmenorrhea, Ergoapiol (Smith) has acted in my hands in a most satisfactory manner. In scanty menstruation, I found it particularly valuable, and I shall enter in detail about one of a series of cases of this character, later on in this article, where this agent brought on a full menstruation and the general health of the patient began to improve at once. When mental perturbation is a factor in these cases it is manifestly the duty of the physician to have the environments of the patient made as quiet as possible, and anti-spasmodic or nerve sedatives should be added to the treatment.

When amenorrhea is associated with syphilis, the uric acid diathesis or morbid condition must receive correct treatment. My experience with Ergoapiol (Smith) is such that I regard it as an indispensable remedy in all expressions of amenorrhea along with proper remedies for any diseased condition associated in the causation of the affection. Of course those cases where the amenorrhea is due to atresia of the cervical canal, and to any other condition which is remedial only by surgical means, drugs will prove of no avail. The same can be said of instances in the amenorrhea due to a rudimentary state of the female organs of reproduction.

A lady some time ago brought her daughter to my office for treatment of amenorrhea. The girl was 18 years old and was visibly anemic. She had an indifferent appetite and was more or less dispirited. She had enough menstrual flow each month to stain the napkin, but this was all that could be said. I had this patient to take Ergoapiol (Smith), one capsule after each meal, and on going to bed regularly for a month. At the next menstrual period the discharge was without pain and free, and the quantity and color as natural as she had ever known her menstruation to be. She took Ergoapiol (Smith) in the same way another month, and then ceased to have any further trouble. Her color is good and her appetite is likewise excellent; she is full of spirit, and, in a word, well.

A lady, aged 33, had scanty menstruation which had covered the period of a year. At no time in the year had her menstrual period been longer than eighteen hours, but generally twelve hours told the tale. Her menses were not only scanty, but the color of the menstrual blood was pale, and this was attended with a disagreeable odor. This woman had no associated disease that most searching examination could bring out. Still she had

steadily increased in flesh for the last two years, and to this I attributed the amenorrhea.

I had this patient to take systematic exercise and a dietary that was rational, and to take Ergoapiol (Smith) with regularity, a capsule four times a day. After two months this woman ceased to take the remedy, her menstruation having become normal.

A girl, 20 years years old, was sent to me by the matron of a boarding-school. She enjoyed good health prior to entering the school, but for the past three months she had not menstruated and was suffering constantly with vertigo and had attacks of hysteria. I attributed the amenorrhea to change of conditions of life—that of an open life on a farm to that of a shut-in inactive life. Ergoapiol (Smith) was given after each meal for two weeks prior to the day of her usual menstruation. This brought her menses on fully. She has since had no further trouble in this way.

Mrs. A. P. L., aged 35. This lady suffered with frequent attacks of headache, had backaches nearly all the time, and suffered greatly with vertigo. She was the mother of three children, the youngest being 6 years old. For the past four years she had constantly had scanty menstruation and the blood was very pale. She rarely had the menstrual flow to continue longer than fifteen hours. I was satisfied that the vertigo and all her distress was due to insufficient menstrual flow, and I accordingly put her on Ergoapiol (Smith). She took it through the month, one capsule after each meal; but for a week before the expected period she took two capsules instead of one. She was greatly pleased this time to have a full and free menstruation. Acting on my advice, she took the capsules three times daily for two months, and this acted in a happy manner, and she has now passed an entire year and has not failed to menstruate freely.

My diagnosis was fully confirmed by this woman's health being good in every way since the establishment of menses on a basis of health.—*The Southern Practitioner*, July, 1902.

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# Dominion Medical Monthly

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No. 1.

## Original Articles

### INFLUENCE OF HEREDITY UPON THE EXPECTANCY OF LIFE.\*

BY H. R. FRANK, M.D.C.M., BRANTFORD.

That like produces like is a fundamental principle. When deviations in structure frequently appear, we sometimes cannot tell whether it may not be due to the same cause acting on both; but when individuals exposed to the same conditions display deviations which appear in the parent, child, or grandchild, the mere doctrine of chances compels us to attribute its reappearance to inheritance.

That every unfolding organism eventually takes the form of the class, order, etc., from which it sprang, is a fact which by force of repetition has acquired in our minds almost the aspect of a necessity.

It is owing to the recognition of this principle so definitely enunciated by those masters of observation and research, Darwin and Spencer, that life insurance to-day is the exact institution it is.

Working largely upon this principle, the profession has been able to formulate those laws of mortality without which life insurance would be a speculation—no more and no less. However, having declared the pronounced influence of heredity upon the longevity of a candidate, let us look at the conditions which determine his relationship to those laws of mortality.

We must have accurate information as to his family history, not only the immediate family, but progenitors through at least

\*Symposium on Life Assurance contributed to Ontario Medical Association, June 14th to 16th, 1904.

two generations. We must know his personal history. We must know his habits and environments.

In seeking a just conclusion we find these several conditions so interdependent that it is frequently difficult to arrive at an opinion. It is true he may have an hereditary taint, but his habits and environments—I mean his regularity in the pursuit of such hobbies as tend to improve his physical and mental conditions, and particularly, a financial standing, which insures his power of indulgence in them.

It appears to me that this phase of an applicant's standing is not sufficiently recognized, for if at the first appearance of an ailment a man seeks and is in a position to follow advice, he is surely not in the same class as the man who is compelled to adhere to any occupation he may be following.

While we recognize the truth of existing hereditary influences, we must not consider alone those working for ill, but must also keep in mind their possible modification through healthy hereditary channels. It is true that mental or physical characteristics may be traceable through generations, but we have to deal with the individual. A man stands, not as the counterpart of his father or mother but as the accumulated influences of generations. Particularly does it seem to me that environment plays a great part in modifying many hereditary traits. Under the influence of modern treatments, we know that we must even now begin to look more hopefully at that most potent of all hereditary influences—the predisposition to the acceptance of the infection of phthisis.

What I wish to be gathered from this, gentlemen, is that while we should be zealous in our endeavors to protect the company from bad risks, we should not forget that we may be holding from them good business, not to mention the withholding of protection from the candidate. After this has been said, and we are cautioned against overlooking those conditions which may modify an hereditary taint, we know that parents exert a most appreciable influence on their offspring. The history as far back as it can be traced should be gone into. Diseases skip generations, and become potent in the grandchildren.

Mental qualities are not, as a rule, very traceable, but the nearer we approach the physical organism, the more active become the influences of heredity, and while the family may have a history of longevity we will find on looking into it that it means a succession of physically and mentally well-balanced progenitors and in the short-lived family we usually find the combined

influence of parental taint—the father's predisposition supplemented by that of the mother, and by so much intensified.

We find that that great observer, Darwin, points out the transmission of disorders and malformations, the tendency of a child physically in the likeness of a parent to exhibit the same diseases as that parent, etc.

The disposition of families to contract certain epidemic affections is also demonstrated as well as the appearance at a corresponding time of life of inherited diseases.

Another point to be noticed in considering the question of heredity is the intensification of some traits by transmission, and the complete elimination of others. Examples of these will be placed before you in considering some of the more common diseases in detail.

While we are dealing wit' the subject in a general way it would be well not to overlook the fact that a mother may transmit a disease without herself becoming infected, and that certain diseases in the ancestry produce a tendency to certain other affections in succeeding generations.

When we come to consider in detail some few of the more common diseases which are either directly transmitted or where the predisposition is passed on, the most prominent is, of course, phthisis, not only because it is the most widespread of maladies—"a disease of all times and countries."—but also because in considering an applicant's fitness for acceptance, a great many influences have to be considered by the examiner.

When we attempt to consider, with any degree of accuracy, the influences which heredity bears on this subject, we are at once confronted by the many fallacies to which investigation is exposed. Bronchitis, pneumonia, and pleurisy, are frequently described as cause of death in parent, grandparent, uncle, aunt, or brother. The examiner must carefully look into all such causes of death, and he will frequently find that a parent, etc., who died from pneumonia had been confined to his bed for two weeks, but ailing from a cough for some months before.

We must ever have before us that latent objection on the part of the laity to admit even to themselves that there is existent in the family a tubercular taint. It is not within the province of this paper to discuss the different channels through which tuberculosis may be transmitted, whether the bacillus is directly passed on or the tendency to its acceptance.

From a wide comparison of statistics, however, there are some general deductions which are accepted and are of great aid to the examiner.

That the extremes of life are comparatively free from danger, the most potent period being youth and early manhood; that the disease is rarely encountered after forty-five; that when there is a family history of phthisis the disease will, in all probability, appear earlier in succeeding generations; that the inherited tendency is more potent in females than males; that an inherited tendency may be transmitted through healthy parents, they being "silent carriers"; that different forms of the disease run through families, in one case the acute tubercular, in others the fibroid type; that if the taint exists on one parental side only, the potency is nearly two-thirds less than if both parents had been afflicted.

In reviewing the undoubted tendency, whether direct or indirect, that exists to the inheritance of this disease, I think we must more fully begin to realize the great influence that environment plays both in a prophylactic and curative way. We have all of us seen cases of incipient phthisis, where under proper regime and treatment the disease has been stayed in its progress and finally eliminated.

It is in the consideration of such cases as these that the opinion of the local examiner is not sufficiently consulted. He alone knows the habits, disposition, and financial standing of the applicant; and while it is readily conceded that the company should be protected by a lien or a modified policy, there is no reason, in my opinion, why such applicant should be absolutely refused or placed in the same class as those who are of different habits, disposition or financial standing.

Approaching the subject of the hereditary influence of insanity immediately after discussing phthisis, I do so, feeling that while not so common as many other diseases, its influence is more frequently overlooked than it should be.

The tenacity with which this taint clings to succeeding generations, presenting itself, as it does, in various forms, is worthy of the gravest considerations. It must be remembered that while the disease may not be transmitted in its primary form, we frequently see in the grandchildren outcroppings of epilepsy, hysteria, eccentricities, and predominating nervous temperaments. I have now under my care three epileptics, cousins, where the three fathers are sons of an insane mother; otherwise the family seem to be in perfect health.

Either parent can transmit the disease and the mother will pass on a paternal influence without herself being affected. It must ever be kept before our minds that the disease generally increases in potency in succeeding generations.

Having spoken of insanity, we naturally drift into a consideration of nervous diseases generally, and find that many of them are hereditable, such as general paralysis, mania, and, according to Charcot, locomotor ataxia, when it has developed in early life.

We are advised by Pollock that in considering these cases careful inquiry should be made as to the predisposition of brother and sister to a neurotic tendency, and if such disorders exist the applicant should not be accepted, unless he has attained middle life, is of good habits, and has developed no neurotic symptoms.

Epilepsy is undoubtedly a disease of marked hereditary tendency, and while it may not appear as such, we are almost sure to have some neuroses. Mother's influence in transmission is more potent than father's, and in all cases after forty years of age the applicant may be considered as free from hereditary influence.

When we come to discuss the hereditability of cancer, we are met with a good deal of controversy, but here again we turn to our friend the statistician, and find that it appears in the offspring in something under one third of all the cases, is most prevalent in middle and advanced life, and has a tendency to appear in the same organ as that affected in the progenitor.

In this habit of appearing after a certain period as age advances a contrast is offered to the influence prevailing in phthisis, which we saw decrease after a certain age.

Any attempt on the part of the examiner to trace the hereditary influence of the different forms of carcinoma is practically useless, as it is in the vast majority of cases impossible to get any reliable history.

The accepted directions, in considering these cases, so near as I can find, is that the offspring of a father and mother with carcinoma should be rejected. Where only one parent, and that not imparting the physical type to the child, he may, after living passed his thirty-fifth year, be accepted.

While the prevalence of syphilis is known to medical men to be much wider than the laity suspect, and while, I believe, that it is rapidly increasing as the centres become more thickly populated, and while it is one of those diseases directly transmitted, from the standpoint of the insurance examiner it is of little importance so far as its hereditary influence is concerned, inasmuch as for obvious reasons no history is presented.

With a direct knowledge of the existence of the taint, however, there are some points of value, namely, that the disease may appear in the offspring years after either parent has suffered

from the original disease. The secondary poison may be transmitted from the father to the mother. The inherited taint protects. The disease does not appear in a second generation.

Rheumatism, heart trouble, asthma, hay fever, and diabetes, present a group which by the insurance examiner must always be considered as having a direct hereditary influence on the character of a risk.

The peculiar nervous phenomena working through and intimately connecting these diseases have not yet been made clear by pathologists; but to realize the existence of such a connection we have only for a moment to consider the figures presented by Goodheart, backed by the even larger finding of Salter, *e.g.*, of 123 cases of asthma observed by the former, 50 showed a well-marked neurotic inheritance; in 25 it was apparently the direct transmission of asthma or hay fever; in 8 more, one or other of the parents had had rheumatic fever; in other families there is a history of megrim; in others, somnambulism and diabetes existed.

In dealing with these diseases separately, I must again emphasize the point of their marked connection—for while the examiner is in hot hunt for heart trouble where rheumatism is in evidence, in the history he is very prone to overlook where the grandfather suffered from rheumatism or gout—the probable predisposition to asthma, diabetes and nervous troubles in the offspring.

A rheumatic tendency is, no doubt, frequently inherited; the disease has occurred in the newly born, and the children of rheumatic progenitors are more prone to this trouble than are others, in the proportion of five to one.

The disease may be either directly transmitted, or more often a constitutional predisposition to its development seems to be inherited.—*Cheadle*.

Statistics show that in 30 to 40 per cent. inheritance is a factor in rheumatism. Of course, were we to consider only those cases where there is a double inheritance we would find these figures largely increased, and where the progenitors, through successive generations had been afflicted we would find them not only increased, but the type much more severe and persistent.

Acute attacks are seldom seen after fifty, and in early life, especially about puberty, females are more prone to the disease than males; after that the natural exposure the male is subjected to makes him the most susceptible.

Again, in this disease we see the great influence, environ-

ment, habits, occupation, and social standing have in modifying the potency of the hereditary taint.

We know that damp surroundings, loose living, exposure and insufficient food are able assistants to any inherited rheumatic tendency. The examining physician is practically the only one who can properly judge of these conditions, and his opinion should carry a proper weight.

Rheumatism and heart disease in the nomenclature of the insurance examiner are almost synonymous, but in considering the hereditary influence of the former in producing the latter we are very apt to overlook the tendency in the child of a rheumatic parent to the development of thickened valves, and that without the appearance of any rheumatic symptoms. This is even more common in gout; but as this disease is so seldom met with in Canada I am not devoting that space to it which its important hereditary influence demands, and will dismiss it by drawing the examiner's attention to the marked tendency there is in the offspring of gouty progenitors to heart troubles, and the balance of that group of diseases spoken of.

Asthma, according to Salter, was hereditary in 14 out of 35 cases observed by him. In many the inheritance was direct. The same authority finds the influence most potent in early life up to 20 years of age; rare in adult life, and again appearing in old age.

Trousseau draws attention to the hereditary connection between eczema, rheumatism, gout and asthma. Pollock states them to be simply "different expressions of the same diathesis."

The influence that heredity plays in the appearance of diabetes is too well attested to be doubted. Saundby quotes one example, where it occurred in eight members of one family, extending over three generations. He also draws attention to the hereditary connection between this disease and rheumatism, gout and many nervous diseases.

It is frequently seen in members of the same family, and examiners should be on the lookout for rheumatism and nervous debility in the near relatives of an applicant whose history shows a diabetic diathesis.

In considering the hereditary influence of alcoholism we cannot do better than quote the words of Rolleston. He says: "Hereditary taint may be traced in a very large proportion of alcoholic cases; it is said in nearly a moiety. The children of drunkards are extremely susceptible to the influence of alcohol, a quantity that would not affect ordinary persons intoxicates

them and produces results not so readily seen in more normal persons. It has been said that when the father has been a drunkard it is rather the moral nature of the offspring which is altered; when the taint is on the mother's side that the brain and nerves are particularly liable to suffer; the mother's influence is said to be the more powerful of the two. "Drunkenness not only breeds alcoholic tendencies, but produces a decidedly neurotic taint and a strong predisposition to insanity. . . . Thus the influence of heredity consists in an unstable condition of the nervous system which may be due either to drunkenness or to disorder in the nervous system in the parents."

Here, again, gentlemen, it is scarcely necessary to call your attention to the marked influence for good a healthy environment would exert in modifying an hereditary taint.

Before leaving the subject of alcoholism it might be stated that where such a history is coupled with cerebral hemorrhage, heredity must be considered as a factor in connection with the latter. The same relationship, I would here say, exists between this disease (cerebral hemorrhage) and rheumatism.

A suicidal tendency is said "to run in certain families," but where it "runs in families" it is only another way of saying that there is an hereditary taint of insanity, appearing in succeeding generations. An isolated case of suicide in a family history, with no marked neurotic symptoms, should not bar a candidate.

Having thus briefly reviewed a few of the more common hereditary diseases, I would before closing the paper, like again to draw the attention of the examiner to the relationship he bears to the company and the candidate, where those diseases are concerned that to-day present an hereditary influence, which, by treatment, can be modified.

When I speak of treatment in this sense, I do not refer only to the use of a few drugs, but a possible change of climate, habits, occupation, etc.

It seems to me, gentlemen, that we are on the threshold of a new era; we cannot much longer go on with the present classification; we must prepare ourselves to furnish the actuary with a fresh clause in our law of mortality; we can no longer consider the applicant, who, suffering from an hereditary taint, is subject to the influence of bad habits, surroundings and occupation, as being in the same class with his brother, who has the inclination and means to take advantage of the advanced findings of modern treatment.

We have seen this to be true in many cases of hereditary

influence, and have reason to think that during the next decade similar progress will be made in mitigating to an appreciable degree the potency of many hereditary taints. However, until the profession furnish this fresh clause in our "law of mortality," the local examiner must stand responsible for any recommendations he may make. That such recommendations should be made is a paramount duty when we consider our relationship to the candidate.

The company *may* be guided by a mass of statistics, but the examiner is judging the individual, and must not, through any indifference on his part, deny him a valuable asset, and in many cases a much needed protection.

Before closing, just a word as to the detail of examination, as it appears on, I think, a majority of the forms furnished—the family history is early dealt with, and shortly after the candidate is presented with the question, "Which parent do you most resemble?" If he be at all astute he at once begins to make himself think that he bears a strong resemblance to the healthy side of the family. I have had this experience personally in examining, where I knew the opposite to be the truth.

In this paper I have not given space to crediting authority, but wish to say that I have quoted from Saundby, Pollock, Rolleston and others.

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## EXPECTANCY OF LIFE IN MORBID CONDITIONS OF THE GENITO-URINARY SYSTEM.

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BY F. LEML GRASSET, M.B. (EDIN), F.R.C.S. Eng., M.R.C.S. Eng.

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I hardly think the idea outlined on the subject of these short papers on life assurance by different men, and designated, "Expectancy of Life," in morbid conditions of the various symptoms is to be taken literally. Expectation of life is practically an actuarial question. It indicates the average number of years which is lived by all persons of a common age, from that age up to the extremity of life, and it has no relation whatever to the most probable lifetime of any given individual. Medical examiners should, therefore, guard themselves from forming

the opinion that a proposer who is likely to reach his expectation is entitled to rank as a first-class life. I think the title is rather to be used as a guide in dealing as one sees best in the space allowed with the subject from an insurance standpoint.

In genito-urinary disease, as a cause of death, given by the Mutual Life Insurance Company, of New York, in the celebrated report on their mortality statistics, show 3,951 deaths in a period of fifty-six years, in which all the deaths from all causes were 46,525. Two diseases were responsible for the vast majority of deaths, and these statistics are borne out by those of the company, of which I am medical director. Two diseases, or titles, of this class seem to have paramount importance -Bright's disease and disease of the prostate gland, with the resulting inflammation of the bladder and pelvis of the kidney. Renal and vesical calculus are responsible for ninety-five deaths; stricture and undefined diseases of the kidney for a few cases. I propose to eliminate both these chief factors of mortality from my paper, because disease of the prostate, in its interesting surgical aspect, is to be discussed by capable men at this meeting. That they will speak most hopefully of successful surgical interference I feel sure; that any such success tends to lower the mortality from this cause, or at any rate to defer the time of dissolution of aged policyholders to the benefit of the insurance companies.

Bright's disease, or albuminuria, is a very charming and difficult subject to the medical director. The applicants in this connection are those of large interests, successful men, able to take large insurance policies; think they are in the best of health, and very often agents seeing them cannot understand why they are not acceptable to the company. This subject was, I understand, touched on lately, and, therefore, I thought I could, for a brief period, speak of a general disease complicating life insurance, namely syphilis. I think a good deal is to be done in investigating and collecting information as to the effect that syphilis has on life insurance (I find very little in medical literature on this aspect of it), before we will be in any position to assign it a true place. The object of this paper will be attained if I draw the attention of examiners to the necessity of close examination in all cases where syphilis has been thought to have been present. Usually the practitioner looks at syphilis in another aspect. The phenomena are actually present; his energies are directed to advising the best means of treating the initial lesion, especially if it should assume an unfavorable type, or in a long war against the general infection or secondary symptoms to prevent their far-

reaching effects in the years after. But now he is asked to assure himself that syphilis has been present in the applicant; that he is free from all traces of it. It is not difficult to mistake or confound a chancre or chancroid, and even unimportant sores, like herpes, have been designated syphilis by the unskilled physician or quack, who is not infrequently consulted in such affections, thus most unfairly putting a lasting stigma on the applicant. This shows the necessity of a close examination, and inquiry to determine the number and position of the sores, looking for cicatrices of the same; searching the inguinal glands and the lymphatic glands for evidence of enlargement or operative measures; if enlarged, whether suppuration followed or not. The extent to which secondary manifestations have developed; was treatment used; for how long; did any recurrence of symptoms follow the cessation of treatment. By such care a pretty clear confirmation of the applicant's statement may be obtained. Now and then it is possible—often it is not—to have a statement given by the medical men who treated the applicant as to his symptoms.

This first step of making sure that the applicant has really been the victim of a true syphilitic infection being completed and decided in the affirmative, we are confronted with the question, "What influence and what bearing has syphilis on the acceptance in life assurance?" This is not an easy question to answer; there are so few data as yet gathered, so far as I am aware, that help; the literature of the subject of syphilis deals with nearly every other phase of the subject pretty fully, but only meagerly with this special aspect. Not long ago many life assurance companies were disinclined to accept any applicant that had syphilis; gradually this was felt to be a too stringent and severe rule, but no satisfactory basis has, so far as I know, been arrived at; each company deciding, according to the experience and personal opinion of the medical directors.

In deciding this question, the curability of syphilis, and the permanence of that cure, is a matter of extreme importance. This question is still a matter of difference and doubt. Let me quote a few extracts from those whose opinions are well worth considering:

Berkeley Hill, writing in 1881, roughly divided his cases into curable and incurable. The curable got well in two years, the infection exhausting itself in that time; the incurable lasted an indefinite number of years.

Record, the great French authority, is very sanguine when he says: "Syphilis recognized is half cured."

Pye Smith says: "In the immense majority of cases a person

who has had syphilis is, after a few years, free from it in every sense in which it can be said that one who has had scarlet fever or smallpox is free from that disease."

Gowers, on the other hand, is far from being convinced of its curability when he says: "There is no evidence that the disease is or ever has been cured."

No doubt the destructive tertiary lesions are much rarer now than in former times, but not infrequently their terrible effects are still seen on the nervous system, the viscera, the arterial system, and so we get paralyses, monoplegia, paraplegia, hemiplegia of different kinds, due to deposits of syphilitic material and proliferation of the same. Gummata in the brain itself, or its membranes, or deposited in the walls of the vessels, interfering with the cerebral circulation, often causing miliary aneurisms, leading to apoplexy and hemiplegia.

In the spinal cord gummatus infiltration, localized deposits occur with resultant paralysis. Locomotor ataxia in many, if not in nearly all, are probably of syphilitic origin. Similar results follow deposits and degeneration in the arterial system leading to aneurism in the viscera, especially the liver, kidneys and lungs, also the larynx.

The appearance of tertiary lesions prematurely in early months after infection is a very unfavorable prognostic sign. It is often supposed that the tertiary symptoms are apt to be late in occurring, and after the first outburst of the disease has subsided, there will generally be a long period of latency. This may be so, but in the majority of cases the tertiary lesions appear within a few years.

Dr. Ogilvie has shown that the greatest liability to tertiary symptoms is during the first three years. The only statistics I can find on this point are those given by Fournier. He says: The following statistics, based on 2,395 cases, in which the date of invasions of tertiarism, under all forms of manifestations, could be determined exactly:

During the first year.....	106	cases.
" 2nd year .....	227	"
" 3rd year.....	256	"
" 4th year.....	229	"
" 5th year.....	205	"
" 6th year .....	201	"
Total in six years .....	1224	
From 6th to 10th year .....	499	
" 10th to 20th " .....	543	
Above the 20th " .....	129	
Total.....	2395	

For being able to find these statistics I am indebted to Dr. Marsh, of the Mutual Life Assurance Company, New York.

This shows that if tertiary symptoms follow they will do so in more than one-half of the cases in six years, and nearly in 75 per cent. in ten years.

Further, it is necessary to remember the incidence of syphilis in other diseases and constitutional states. While it is strongly held by some that the prospect of a patient with acquired syphilis be more likely to suffer from cancer or tuberculosis is exceedingly small, it is difficult to divest one's mind of the feeling that it is not a negligible factor.

Having thus briefly outlined the special care in determining the accuracy of the syphilitic history, the direction in which the danger is to be looked for, and the most probable time of its coming, the question remains: Can syphilitics be insured; if so, under what circumstances and conditions. If it be established that an applicant had syphilis, it is a distinct impediment to acceptance on ordinary rates. But if treatment has been efficient, and a period of not less than five years has elapsed since all symptoms have disappeared, he might be accepted, endowment assurance to be preferred. All such applicants should in all other respects be up to the full standard of health and physique.

Perhaps the most recent statistics in connection with the mortality of applicants for life insurance, who in their applications gave a history of syphilis, is published by the Actuarial Society of America in connection with its mortality investigation of special hazards.

This investigation contains the mortality experience of all leading Canadian and American companies upon certain classes of risks. Among these was those cases showing a history of syphilis. Here we have the largest and most recent available mortality statistics of persons showing a history of syphilis.

This experience shows that of persons whose ages at entry were 16 to 28, the actual deaths were 105 per cent. of the expected; while those insured at ages 29 to 42, the actual number of deaths were 134½ per cent.; in other words, 34½ per cent. more than was expected by the table. From ages 43 to 56 the actual to expected deaths was 153.3 per cent. of the expected, while from 57 to 70 it was 101.6 per cent. Taking all ages and durations of policies together, the experience showed that the mortality was 133.3 per cent. of the expected; in other words, one-third more than was naturally expected, according to a table of average lives.

From these figures it will be seen that the extra mortality increases with age up to a maximum and then decreases.

These figures clearly show that a company, composed of persons whose acceptance by that insurance company showed a history of syphilis, experiences a mortality higher than the regular premiums provide for.

These figures also show that too careful inquiry cannot be made by the local examiner when examining an applicant for insurance, and full information should be communicated to the medical directors of the company in cases where a history of syphilis is suspected or discovered.

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## EXPECTANCY OF LIFE IN MORBID CONDITIONS OF THE CARDIO-VASCULAR SYSTEM.

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BY ROBERT J. DWYER, M.B., TOR., M.R.C.P., LOND.).

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Lesions of the cardio-vascular system, met with in the course of life insurance work, present much more difficult problems in prognosis than when met with in the consulting-room, or at the bedside. In the latter, indeed, the prognosis is usually a comparatively simple matter, the condition having advanced to stages characterized by abundant signs and symptoms, which form ample data upon which to base a forecast. In the former, however, the disease is usually incipient, or latent signs being few, and symptoms scanty or absent. Again, when the subject presents himself as a patient, he does so with a frank and open mind, willing and anxious to give all the information he can in order to obtain relief. When the object, however, is life insurance, this aid is often denied us: owing either to ignorance, or it may be unwillingness on the part of the applicant.

Therefore, it follows that the utmost attention must be given to the diagnosis, and the most careful judgment brought to bear on every case of cardiac disease in which an application for life insurance is sought. The problems before an examiner in every such case are first of all to determine whether the heart is performing its function properly at the time; if so, at what cost to itself, and from this and other circumstances shortly to be men-

tioned, to say how long this will probably continue. In order that a satisfactory answer to these questions may be obtained, not alone must the condition of the heart be ascertained by the conscientious application of all the routine methods of examination, but the general condition of the patient must be noted, and a searching inquiry made into his family and personal history.

Among the most important, because most frequent, cardiac conditions upon which medical examiners have to give an opinion, are the various valvular lesions. It is proper, therefore, that we should primarily turn our attention to the consideration of these conditions. Few morbid changes in the body give such striking evidence of their existence as a valve lesion with its attendant murmur. Indeed, so impressive and so valuable is this sign as a means of diagnosis, that unless upon our guard we may give it undue importance in prognosis. In other words, in making a prognosis, to regard the sign rather than the condition. Formerly, when all cases of cardiac murmurs were rejected by life insurance companies, this was not a matter of so much importance. Now, however, that a certain percentage of such cases are rightly admitted to life insurance, it is a matter of great importance to be able to identify and separate this group from those who are not admissible.

This identification is to be made not by regarding merely a given murmur, but by careful consideration of many other circumstances. Murmurs, indeed, have but a limited value even in diagnosis. They may be present when no valvular lesion exists, or again may be absent in severe valve lesions.

Even when denoting the existence of a valvular defect, they form little or no measure of its severity. From the standpoint of life insurance we may divide all cases of valvular disease into three classes:

1. Those in which the only evidence of a lesion is the presence of a murmur.
2. Those, in which, in addition to the murmur, other signs, such as hypertrophy, or modification of the normal sounds are found.
3. Those which, in addition to the foregoing, present symptoms, such as dyspnea, cyanosis, etc.

The last group may be dismissed at once, for already terminal symptoms are present, and with few exceptions, life will terminate in three or four years.

Many of those in the first two groups, however, have a brighter outlook before them, and there may be found a few good risks, some fair and more impossible.

In order to decide in which class a given case should be placed, it will be necessary to direct careful attention to the following points:

1. The nature of the lesion.
2. The age of the applicant.
3. The cause and duration of the lesion.
4. General physical condition of the applicant.
5. His personal history.
6. His family history.

Taken in the order of severity, the gravest valvular defect is aortic regurgitation, then comes in order mitral stenosis, aortic stenosis, and lastly, mitral regurgitation:

Aortic regurgitation may be practically excluded from consideration. From its general tendency to increase, and the danger of sudden death, it is a condition too formidable to be considered as a justifiable risk for insurance. Clifford Allbutt says that ten years is a long period for this lesion. Broadbent, however, speaks more hopefully, and says that with the second sound heard in the carotid, and with hypertrophy slight, such a lesion, resulting from a rheumatic attack, may exist for many years without giving rise even to discomfort.

Such cases, however, are the exception, and the lesion, if established early in life, will probably terminate the latter, shortly before middle age is reached.

Where the lesion develops later, as the result of degenerative changes, the prognosis is much worse; at the most two or three years will be the duration of life.

The same is true when it is the result of syphilis or excessive physical strain in early manhood.

#### MITRAL STENOSIS.

Here also we have a valve lesion, essentially so grave that very few, if any, of its victims would be accepted by life insurance companies on any terms.

The average duration of life for those suffering from this lesion is 33 years for men, 35 or 36 for women.

The gravity of the lesion is the result of the inherent tendency to increase in severity, and its intimate relationship to the pulmonary circulation, whereby any attack of bronchitis or pneumonia injuriously affects the already embarrassed right heart. Exceptions, however, occur to this rule.

Quite recently I performed an autopsy on the body of an aged woman, dead of pneumonia. She was upwards of seventy

years of age, and had for some time suffered from paralysis agitans. On examining the heart, the mitral orifice was found to be markedly contracted, due to thickening and adhesion of the mitral flaps. Such examples, however, must be rare.

In connection with mitral stenosis, attention may be called to its occasional latency and consequent difficulty of diagnosis. When accompanied by its characteristic presystolic thrill and murmur at or near the apex, with its peculiar snapping first sound, it cannot be mistaken; but in this lesion, more than any other, the murmur is notoriously variable.

In some cases it may be at times entirely absent, and if we relied upon the presence of a murmur to make the diagnosis, the condition would be overlooked. In such a case a hint would be given by the characteristic first sound. If with such a first sound the area of cardiac dulness was found to be increased upwards and to the left, along the third rib, and the pulmonic second sound was found to be accentuated; if with these signs there is any pulsation to the left edge of the sternum, it would be justifiable to suspect the existence of mitral stenosis, and this suspicion will be strengthened if there is the slightest indication of cyanosis or breathlessness.

#### AORTIC STENOSIS.

If all cases presenting a systolic murmur, heard at the second right interspace and transmitted up over the sternum into the neck, are to be called aortic stenosis, this lesion will be found to be not alone the most common but the most harmless of all cardiac diseases. But it is found that the large majority of cases in which this murmur is present have no narrowing of the aortic orifice. The causes which produce this murmur, apart from aortic constriction, are blood conditions giving rise to the hemic or functional murmur; roughening of the valve cusps either from endocarditis, or deposit of lime salts; more rarely, congenital fenestration of the valve may give rise to a murmur, and, lastly, dilatation of the aorta itself may cause a murmur similar to that of aortic constriction.

Excluding those in which the murmur is due to some blood condition and which are, therefore, of no importance in prognosis, and also those in which the lesion is dilatation of the aorta and where the prognosis is, therefore, very grave, there are still many cases which would be eligible for insurance, either as fair or doubtful risks.

It is in this class of cases that we must carefully consider the

different points previously mentioned. Of great importance is the cause of a given defect in the valve. Rheumatic endocarditis is the most favorable. Syphilis and degenerative changes are very unfavorable causes, and should lead to the rejection of the applicant, not on account of the valve lesion alone, but on account of the attendant conditions. The age of the applicant is also of importance. If at or before the middle of the third decade, provided syphilis is excluded, the lesion is probably due to rheumatism, and is, therefore, favorable. In the fourth decade, or later, degenerative changes may be suspected.

Generally speaking, too, the longer the duration of the condition, as conjectured from the attack of rheumatism, the greater probability is there of it being stationary, and, therefore, favorable.

The condition of the heart, apart from the murmur, should be most carefully ascertained. The presence or degree of hypertrophy will form a measure of the severity of the obstruction. The less hypertrophy the less severe the lesion. If with little or no hypertrophy there is a loud and long murmur, no increased tension of the pulse, and no change in the first sound at the apex, we may conclude that the lesion is unimportant.

Where, however, hypertrophy is pronounced, and the apex beat is markedly displaced downwards, the lesion is more severe and the outlook not so favorable. Further, attention must be given to the applicant's personal history; his occupation, habits and social condition must be taken into consideration. Finally, his family history will be of importance. Absence of gout or renal disease will be favorable, while the history of these and a family tendency to early death will be unfavorable. While the average age of death from this disease is placed at forty, a fair number may go for several years longer. Once, however, symptoms of cardiac embarrassment have arisen in this disease, even in the earlier adult life, the prognosis is decidedly unfavorable.

#### MITRAL REGURGITATION.

This lesion is not alone the most common, but is the least grave of all the valve lesions. In giving a prognosis the same considerations must be borne in mind as were spoken of in the previous lesion. The large majority of cases result from rheumatic endocarditis. Following this, degenerative changes, such as calcareous deposit and dilatation of the left ventricle from myocardial conditions, are causes to be borne in mind. Where the lesion is the result of endocarditis, and where the leakage

is moderate in amount, as shown by the position of the apex at or just without the nipple line, and when from its duration it is probably stationary, the prognosis is good and life will be prolonged into old age.

Even when in addition to all the physical signs of the lesion being present, there are also symptoms of cardiac failure, such as cyanosis and dyspnea, recovery may take place, and the patient live for many years in comfort.

When the lesion is due to dilatation of the ventricle, causing a relative incompetence, the prognosis will depend upon the cause and the age of the patient. If due to some acute condition, such as typhoid fever or diphtheria, or if occurring in the course of anemia or alcoholism—if it be in early adult, or even later life, complete recovery is often possible.

If, however, the dilatation is the result of coronary arterial disease, a lesion of middle life, the prognosis is very unfavorable.

Many cases of mitral systolic murmur, occurring at or after middle life, may exist for upwards of twenty years without change or discomfort. In such cases the murmur is due to roughening and thickening of the valves, the actual leakage being little or none. Here the prognosis depends, not so much on the valve condition, as upon the attendant conditions, viz., general arterio-sclerosis.

In all cardiac valve lesions, no matter of what variety or degree of severity, particular attention must be given to the character of the pulse as regards its tension and frequency. A high pulse tension is, in many individuals and families, a constant condition, even in the absence of any pathological change. Should a valve lesion develop in such an individual, the prognosis would be much less favorable than in an individual with a pulse of low tension, for with high pulse tension the heart will be less able to overcome the valve defect, or having done so, will break down much earlier. To a less degree the same may be said of one whose pulse rate is habitually much above the average.

By a careful consideration of all the facts in each case, as above indicated, there is no doubt that a considerable number of those possessed of some of the valve lesions could with safety be insured.

In this connection it is to be borne in mind that little must be known of the length of the latent period in many of the subjects of valvular affections. By the latent period one means the length of time elapsing between the establishment of the lesion and the onset of cardiac breakdown.

Observations of the first event are common enough, occur-

ring, as it does, in an attack of rheumatic fever, or other acute disease, but it is only when the second event occurs that the case is again brought to notice, and the duration of the condition can be thereby determined.

Just what percentage of cases, in which a valve lesion once established never gives rise to any symptoms throughout a long life, is unknown. An appeal to the post-mortem records of hospitals will not give an accurate answer, for an undue proportion of such subjects are the victims of poverty, and of vicious habits; conditions which would not apply to the class of persons able to buy life insurance. Every physician, however, of experience has knowledge of cases where, notwithstanding the existence of some valve lesion, which has probably been present for a long period, no inconvenience has resulted, and life has been ended by causes quite apart from the cardiac defect.

In this connection the following brief outline of a case, under my observation, may be of interest:

Six years ago, a farmer, aged 33, consulted me for some dyspnea, precordial distress and rheumatic pains. His family were rheumatic, and his father had died about the age of sixty of some cardiac condition. He himself had had two attacks of rheumatism; the first one fourteen years previously; the second two years previously to the time I saw him. In both attacks had suffered "pain in the heart." At the time I first saw him he was disturbed by various subjective complaints, as he was markedly neurotic.

The cardiac condition was of great interest. He had a loud, high pitched, musical diastolic murmur, which he himself could hear quite distinctly. It was heard from the second rib on the right side down the sternum, and out almost to the nipple line. The pulse was soft and a capillary blush in the fingers and the forehead. The heart was not enlarged, and the impulse did not indicate hypertrophy. The rhythm and site of the murmur pointed to aortic regurgitation. I have seen him at intervals ever since. One year ago the murmur could hardly be detected, then only on exertion, or on taking a full breath. For the past six months it has been entirely absent. In every respect the heart and blood vessels are absolutely normal. There is no increase of the pulse tension, or of cardiac dulness, or strength of impulse, such as might signify the possible transition of a regurgitant lesion to a stenotic one.

As he is at present, one unacquainted with his past history would, without hesitation, admit him to life insurance on the usual terms. This case is all the more interesting in that the

lesion was the most serious of all the valve lesions, viz., aortic regurgitation.

To conclude, I might cite a number of cases which I have been watching for years, subjects of mitral disease, and in whom there have been, as yet, no evidence of cardiac embarrassment.

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## EXPECTANCY OF LIFE IN MORBID CONDITIONS OF THE RESPIRATORY SYSTEM.

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BY EDWIN RYAN, M.D., KINGSTON, ONT.

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In valuing the expectancy of life in conditions of the respiratory tract, it is all important to have regard for every element bearing upon the hereditary, social and moral aspect of the life in question. There can be no denying the fact that heredity plays an important part in the conditions of the respiratory tract. The old dictum of Heine, "We cannot be too careful in the choice of our parents," should always be before our eyes in dealing with this complex question. It is contrary to the natural law that we can in any manner escape our hereditary predispositions.

In reference to hereditary diathesis, this also may be laid down to that acquired disease, and the effects caused by disease cannot in general be transmitted in such a way that the offspring presents lesions identical with those produced in the parent. There is the possibility of a certain amount of transmission, not of the identical lesion caused by the disease in the parent, but by a modification or impaired condition of the germ plasm. We must recognize that constitutional disease, by leading to disturbance in the activity of the important organs, plays not only directly upon those organs, but, secondarily, upon other organs; that it leads, for example, to altered conditions of the blood, and so to altered nutrition of the cells of the body. Many other cells—the germ cells—may be directly affected, their idio-plasm modified, and the offspring directly influenced. Conditions affecting the parents are capable of influencing and modifying the descendants. It is this which is forcibly brought home to us in our medical work. It is changes of this order which are almost invariably unsuspected by the biologists, for they are not within

their ken. The changes brought about in the tissues by what is assigned chronic intoxication may be so slight as to be unappreciable. Microscopical examination may reveal nothing; only by their physiological effects can their existence be recognized.

It would be absurd to argue that the immature germ cells lie absolutely dormant in the organism; they need nourishment; they assimilate, and should they absorb circulating toxines; their idio-plasm must be affected by this act.

Parental intoxication, therefore, is seen to be capable of directly affecting the germ cells, and, if there be no direct transmission of the effects of such intoxication, certainly there are indirect effects.—*Adami*.

It seems clear, therefore, that conditions affecting the "Respiratory Tract" in the parent—of whatever character they may be—influences to greater or less extent the value of any risk. The fact that since Koch discovered the tubercle bacillus, and the contagious character of the disease has become known, the death rate has steadily diminished, does not alter the situation. The death rate from tubercle was decreasing before Koch's discovery; it has been decreasing for the last half century, and is, no doubt, due to sanitary conditions, and to the improved social and moral life on all sides. We now observe a marked rebound on the part of insurance examiners from the position obtaining a short time ago. Every medical examiner now recognizes there is no factor in life insurance of more importance than a family history marked by tuberculosis. The experience of the United States Life Insurance Company for twenty-three years shows that 27 per cent. of their mortality was due to consumption. Equally striking is the table prepared by the Mutual Life Insurance Company. Dealing with their entire mortality during the fifteen years, from 1879 to 1893, which amounted to 22,085 cases, up to twenty-nine years of age, the mortality was 35.8 per cent. of all cases in non-consumptive families, and 45.6 in families with a tainted record. In the next decade 26.3 and 39.6; in the next, 17.6 and 24.6; in the next, 6.7 and 15.7; in the next, that is, from sixty to sixty-nine years of age, the ratio was 5.8 and 8.2. A more recent tabulation of the mortality in this company, from 1843 to 1898, covering 46,325 cases given to tuberculosis, 5,585 deaths, a percentage of 24.27 under forty-five; 10.88 between forty-five and sixty, and 40.3 above sixty years of age. Of late years, however, it has been proved that a bad family history may be largely neutralized by a good personal record, the chief indication being the weight of the applicant.

Dr. E. J. Marsh has made this very clear in the table referred to, and from it he is led to the following striking conclusion:

1. That the history of consumption in any member of the immediate family increases the probability of its appearance in an applicant.
2. That consumption in a brother or sister is at least of equal importance as when it has occurred in a parent.
3. That persons who are under the standard or average of weight are much more liable to consumption than those above this standard, while the peculiarity of constitution which is indicated by the inability to take and assimilate a proper amount of nutriment, indicated a susceptibility to phthisis, or at least is a reasonable suspicion of such predisposition.
4. That persons who exhibit a robust and well developed body have little susceptibility to consumption. That the personal conditions of weight and robustness has afforded more value than family history. The evidences presented by a well-developed body may outweigh the suspicion attached to an unfavorable family record.—*McPhail.*

It does not change the aspect of the question to say that the death of applicant's relatives was brought about by "consumption of alcohol." In fact, that makes the situation all the more serious, for here there is a double inherited tendency.

In connection with all conditions affecting "Respiratory Tract," the applicant's occupation, his social and moral surroundings, and his own habits of life have a most valuable bearing. There can be no question of doubt but that a well-regulated mind and body form a strong protection against an hereditary enemy. The same can be said, too, with regard to a purely acquired disease. If an applicant has suffered from, say, bronchitis, or pneumonia, or pleurisy, the conditions that govern his life, subsequent to these diseases, must certainly be taken into account. Those who live an out-door life, whose occupations afford them plenty of pure clear air and healthful exercise, certainly cannot be placed side by side with those who are working in the contaminated air of mills and factories. As already pointed out, too, the present bodily condition of the applicant, whether he be well-nourished, etc., must have an important bearing.

All conditions, such as enlarged glands, cough of any character, hoarseness, the strumous appearance—disease, indeed, of any kind, or occurring at any time of life—must greatly influence us in arriving at an intelligent decision. The presence of catarrh in any form, nasal, naso-pharyngeal, merits the closest inspection.

Coming now to the specific diseases, let us consider each in ques-

tion. Hoarseness, of course, may not have any direct bearing, but its specific cause must always be determined, and its presence should always be regarded with an unqualified suspicion. No applicant, who is subject to hoarseness of any duration, should be admitted.

Asthma, while it may be due to other than respiratory causes, in time has an influence on the respiratory tract. Asthma most decidedly has a strong bearing on the expectancy of life. If there be any hereditary tendency to tubercle, or other lung affections, asthmatics should not be accepted, nor should persons over forty five years of age be regarded as insurable if they have any tendency to asthma. In young subjects, if the attacks are at long intervals, the disease, of course, is not so serious.

Emphysema forms a bar to insurance. The expectancy of life in subjects so affected is, to say the least, very problematical.

Pleurisy, if a long interval has elapsed, and if careful examination reveals no present lesion, may not debar an applicant. But there can be no doubt that pleurisy, if not due to tubercle, greatly influences the oncoming of that disease. Those affected with pleurisy must be examined with the greatest caution. Even then recent cases should be excluded.

Bronchitis, if long continued, or if repeated, lowers the tone of the "Respiratory Tract." An applicant who is subject to repeated attacks of bronchitis, will not likely fulfil the expectancy of life.

The occurrence of hemoptysis also needs to be carefully considered. Indeed, unless there is some indication of trauma due to a heavy strain, such as lifting, etc., it is nearly always associated with incipient phthisis, and no matter from what cause it is due it seems to me reasonable that it leaves permanent injury to the lung.

Pneumonia may not influence the expectancy of life if it runs the regular course. Repeated attacks of pneumonia reduce the vitality of the lung. Broncho-pneumonia, or pneumonia of any form, where resolution is unduly prolonged, influences the expectancy. Great care must be exercised in these cases.

## THE NERVOUS SYSTEM IN RELATION TO LIFE ASSURANCE.\*

BY H. C. SCADDING, M.D., TORONTO.  
Medical Director, Canada Life Assurance Co.

By the kind permission of the Management of the Canada Life, I am permitted to present to you some tables, based upon the claims from diseases of the nervous system during the last four years.

The taking out of the mortality statistics in the past, has been, though very instructive, a very laborious business. The introduction of the card system to aid in this particular, has been a great boon.

With the aid of our able actuary, Mr. Sanderson, a claim card was designed, upon which has been recorded the particulars of the risk as it became a claim, and which, we trust, in the future, will provide interesting material from the medical standpoint in life assurance.

Unfortunately, there did not appear certain questions in the earlier medical forms which we now deem important, and so, for many years, we cannot expect to reap the crop of information which we at present think would be of interest. Perhaps at the end of twenty years, with the advance of medical science, we will then regard as useless what we now think to be essential.

Great care is now being taken to obtain by special form, and supplementary inquiry from the head office, the actual cause of death, and as greater accuracy of report is being attained to, owing to increasing knowledge of pathological processes, the returns are becoming correspondingly less indefinite. "Dropsy," as a cause of death, is now rarely, if ever, returned; and "paralysis," though still frequent, is much less so, year by year.

It is possible, of course, that many deaths returned as "apoplexy" are in reality "cerebral softening," or *vice versa*, but considerable care has been taken to classify the causes from the histories of the fatal illness, and I think the result fairly accurate.

I hope not to weary you with statistics, and, inasmuch, as the figures are "small," I trust that you will permit me to make short reference to them.

There are 221 cases in all, and they represent 17 per cent. of deaths from all causes. Of these, as is to be expected, the apo-

\*Read before the Ontario Medical Association, June 16th, 1904.

plexies contribute 10 per cent.; cerebral softenings, 3 per cent.; general paralyses, 1 per cent.; meningitis, 1 per cent.; and of the other brain and cord affections, each less than 1 per cent.

Perhaps the most noteworthy facts brought out by this small series of cases, are that the largest proportion—32 per cent.—of apoplexies, occurred in the age group 55 to 64. The average age at entry being 41, and the average duration of each life 21.87 years. Sixty-nine or 31 per cent. of the general paralyses occurred in the age groups 35 to 44 and 55 to 64 respectively; the average age at entry being 32, and the average duration of each life being but 14.83 years.

Most of the diseases of the nervous system, for which the medical examiners for life assurance are concerned, are so closely linked with disorders of the vascular system that it is impossible to dissociate them.

The cerebral apoplexies, for instance, which form by far the greater number of deaths ordinarily classified under the nervous system, are, of course, primarily due to disease of the brain vessels; and the general paralyses, which also contribute largely and expensively to the mortality, are, without doubt, dependent upon an imperfect or vicious blood supply.

The acute affections of the nervous system, such as meningitis, occur in the main early in the policy life, and may be compared to the pneumonias, etc., the mortality from which cannot be influenced by medical selection. The same may be said of the cerebral softenings, the claims occurring in the late policy years.

#### INFLUENCE OF MEDICAL SELECTION.

It is common to regard five years\* as a period wherein the influence of medical selection is felt. In the mortality statistics of the Mutual Life of New York, extending over a period of fifty-five years, and embracing 46,525 deaths from all causes, Dr. Marsh points out that while deaths from Bright's and heart disease are diminished during at least part of that time, apoplexy and allied affections "give very little indication of being subject to control by medical selection, the company's mortality being almost as high in the first year after insurance, as at any subsequent period."

While consumption was, generally speaking, held to be the greatest foe to life insurance during the period to which these figures have reference, and while evidence of Bright's and disease

\*This has been recently extended.

of the heart were sought for with more or less care, how little attention was paid to diseases of the vascular system by the examiners, and how little weight attached by the medical advisers to a family history of arterio-sclerosis, gout, rheumatism, asthma, or neuropathic manifestations!

It is a matter of common belief, although it is impossible to demonstrate the fact, that the prevention of apoplexies has been effected by timely advice to patients in whom the medical attendant has found diseased vessels, and it would seem reasonable that as examiners become more alive to the necessity of, and better versed in, the examination of the vascular and nervous systems, and as medical advisers give more weight to the effect of heredity in such affections, so surely will the influence of medical selection be felt, not only in the first five years of policy lives, but also to some extent throughout.

Unfortunately in the cases referred to in the tables under the heading of "General Paralysis," there was no history given of syphilis—no particular question as to this very serious disorder entering into the earlier medical forms. That syphilis is the predisposing cause of paresis and tabes is now a matter of very general consent. What wonder, then, if we advise our companies to decline to accept risks on standard plans, wherein there is a past history of syphilis, a neurotic taint in the family, and an occupation liable to prove the exciting cause of a general paralysis in the early policy years, and escaping that, a tabes, but little latter in the policy life.

Perhaps, a recapitulation of the important points in the examination will be of practical utility.

#### FAMILY HISTORY.

Heredity undoubtedly plays a most important role in determining the life expectancy of those whose antecedents suffer, or have suffered from diseases of the nervous system. How commonly epilepsy in the father is followed by insanity in the offspring; hysteria in the mother, by epilepsy or other neurosis in the child; and insanity, or that which predisposes to it, alcohol, in both parents, followed by idiocy in the offspring!

Perhaps the remote family history has a greater bearing on the outlook, as regards the nervous system, than it has upon any of the other important systems. Mental disorders like gout have a tendency to skip a generation, making their appearance in the first and third generation, and leaving the second apparently untainted. Where there is a suspicion of neuropathic liability, it

is undoubtedly important to obtain the collateral family history, and to question closely as to whether there are or have been any cases of mental alienation or other serious neuroses.

Diabetes and Bright's disease, gout and rheumatism, occur so frequently in neurotic families, that due weight must be given to these when they appear in the family history of the applicants showing even slight tendencies to disorders of the nervous systems. It will, therefore, be apparent how important a matter it is to obtain as definite information as possible regarding the family history.

#### HABITS.

If heredity is the primary predisposing factor to be considered in determining the resistance of individuals to disorders of the nervous system, alcohol is a good second, with syphilis pressing it hard for the place.

The importance, therefore, of accurately reporting the habits cannot be over-estimated. The difficulty of so doing is often very great, and greatest usually in those cases where accuracy is most important, owing to the unreliability of those applicants who are given to over-indulgence. Great as the difficulty is, however, it is a bagatelle compared with that with which the medical director of the assurance company is confronted when he endeavors to estimate the risk on such expressions as "no habit," "drinks when he feels like it," "occasionally," and a host of other indefinite terms.

#### THE REFLEXES.

While the reflexes which interest neurologists are far too numerous to mention in an ordinary discussion on life assurance aspects, yet there are certain well-known ones, that are of the utmost importance and should be tested in all cases coming before the medical examiner.

The absence or alteration of the pupillary reflexes is easily discerned, and gives most valuable information as to the integrity of the centres or the sensory or the motor branches of the arc.

#### USE OF THE OPHTHALMOSCOPE.

The use of the ophthalmoscope may be thought to be an unnecessary refinement of examination; yet a number of early manifestations of serious affections it alone may reveal. In cases and places where it would seem to be most useful, however, e.g., prosperous proposers, past middle life, living in large

centres, applying for large amounts on cheap plans for business or family protection, there are fortunately capable ophthalmologists, whose aid undoubtedly should be sought to determine the eligibility of the risk.

If the knee jerk appears on the common test to be absent, a more careful examination should be made before pronouncing it to be abolished. While the applicant is seated upon a table, so that the feet do not touch the ground, his eyes closed, limbs bare, and hands firmly grasping the edge of the table; the examiner taps the tendon with a percussion hammer, or the ulnar surface of his hand, the other hand grasping lightly the leg above the knee. If not absent, is the patella reflex increased or diminished?

The absence of the heel tendon reflex is an early indication of tabes. The ankle-clonus is also indicative of disease.

The presence of the "Romberg symptom" indicates static ataxia, and should always be searched for, it being just as important to know that there is perfect balance of muscular action as it is to determine muscular power or paralysis.

Any peculiarity of gait or attitude should be observed and recorded, as it may indicate pathological conditions. If the handwriting is ataxic or temulous, further examination as to the cause is desirable.

#### ARCUS SENILIS.

The presence of the "Old Man Arch," or Arcus Senilis, should always be noted, though it is not *per se* of much prognostic value. It has been held in the past to be a sign of fatty degeneration of the heart, but is now regarded in general as a failure of nutrition incident to age. Heredity seems to play some part in the production of this phenomenon. Moore has known a family in which three male members have had the complete arc before 35 years of age, and in a family well-known to myself, the mother and two of three children have well-marked arcs, the children exhibiting it before 30 years of age, and having no evidence of degeneration of heart or vessels. It will, therefore, be seen that taken by itself in determining the apparent age, or the presence of arterio-sclerosis, it may lead the examiner into error.

#### HEADACHES.

The history of headaches should always be closely inquired into. While some are due to slight disturbances of the digestive tract, which would have little bearing on the life risk, others may indicate the approach of very serious brain affections. The

severe nocturnal general headache is most suggestive of syphilitic disease of the arteries of the brain, and the persistent frontal or occipital headache may be the earliest symptom of brain tumor. Migraine or sick headache is not by itself of grave import, but this is so frequently an evidence of inherited neuropathic taint, that it should indicate the desirability of close inquiry into the family history, direct and remote, as to whether there are or have been cases of mental alienation in the ascendants or their relatives.

The eye strain headache has a most important bearing upon the life, for if not relieved by appropriate treatment, may lead to early claims by nervous exhaustion, insanity or suicide.

#### TREMOR.

Applicants presenting a tremor at the time of examination should be very closely questioned in order to determine its probable cause. Excuse is not infrequently made that a slight tremor of the hand or tongue is due to "nervousness," owing to the fact of the examination, and occasionally this may be true; but its presence should always be noted on the medical form, or by confidential letter to the company. It may indicate secret addiction to alcohol, when the habits are alleged by the applicant, and believed by his nearest friends to be exemplary.

The character of an alcoholic tremor is too well-known to all to need description. Excessive use of tobacco sometimes occasions tremor; but it is usually accompanied by irritable heart and inflamed throat and other symptoms incident to the excess. Intention tremor, in a large majority of cases, indicates disseminated sclerosis. It is the result of muscular inco-ordination when any attempt at the more delicate movements of the hand is made. Indeed, it is not always confined to the movements in the hands, and it has been noted in the face and in the tongue, and even, according to Starr, in the vocal cords.

The tremor of paralysis agitans is unmistakable, beginning ordinarily in one or both hands, and being slow and rhythmical and ceasing during sleep, but being constant while at rest.

#### OCCUPATION.

There are certain occupations which must be taken into account when examining the nervous system. Not only are some occupations of manual laborers inimical to life through the involvement of the nervous system, but also the callings of those in the higher spheres of life—individuals exposed in ill-ventilated work-shops, to the poisoning of lead, arsenic, etc.; the purveyors

of alcoholic beverages, and those, who, by virtue of constant mental anxiety in business or profession, are particularly prone to nervous break-down. From this last named class the companies sustain the largest individual losses.

It is impossible to frame a medical form particularly covering the nervous system that will give a perfect pen picture of certain proposers, and the medical examiner must be relied upon to amplify the reports in these cases, in order that the medical advisers of the life assurance companies may arrive at a just conclusion regarding the life. A keen observer will always cover the ground with more satisfaction to the company and less trouble to himself, than will the less thoughtful examiner. The first will anticipate the doubts and difficulties of the medical director, and will forward at the time of the examination information amplifying his report. The second will receive questions from the home office, which will involve extra trouble to himself, possible irritation of the applicant, probable disappointment to the agent, perhaps loss of business to the company.

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## LIFE INSURANCE.\*

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BY JAMES THORBURN, M.D.,  
Medical Director North American Life Insurance Co. Toronto, Canada.

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Life insurance, as now conducted, is one of the most important institutions of our time. The history of life insurance is not new, for we find that as far back as in the days of Pliny, long before the Christian era, fraternal orders cared for the sick and infirm.

To insure men against the contingency of death demands that laws governing mortality shall be thoroughly understood, and that influences leading to unusual or extreme fluctuations in such mortality shall either be absent or reduced to a minimum. Nothing is more uncertain than human life when taken individually, but by grouping a large number of lives the approximate period of longevity for each age can be determined with great accuracy. Even our favorable modern conditions of human life are constantly being improved by prudent sanitary laws and other

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\*Written for the Ontario Medical Meeting, held in Toronto, Ont.

conditions. The new Mortality Experience Table, which has been handed down to us by the Institute of Actuaries of Great Britain, and involving a labor of almost ten years, reflects the most modern view of longevity among assured lives. It is interesting and gratifying to observe that on the average the expectation of life is about two years greater than in the former experience tabulated by this body in 1860. Our forefathers did not enjoy the same sanitary laws that now exist. Many of them lived in houses entirely devoid of ventilation, such as chimneys, fire-places, sleeping in drafty and ill-ventilated rooms, improperly heated and imperfectly lighted. It is only at the beginning of the last century, by paying attention to nature's well-established laws, that any material change took place in the preservation of health and prolongation of life. Our dwelling places are now built with the idea of comfort and health, and not merely for external appearance. Very much, however, is yet required in the matter of drainage and ventilation, the removal of cess-pools, and in personal cleanliness. The defects referred to and many others were oftentimes due to the ignorance of the general population, but the more enlightened and educated we become the greater will be the improvement in longevity. I need not remind you, gentlemen, in the treatment of diseases, that the importance of sanitation and hygiene by medical men has been greatly improved within the last quarter of a century. Fresh air and sunlight were looked upon with horror by the nurse, and oftentimes by the medical attendant.

We are all familiar, I am glad to say, with the improvement that has taken place in that period in the drink habit. In polite society it is no longer considered important, or the "right thing," to have wine or spirits on the table at dinner.

For a number of years applicants for insurance were admitted without any medical examination. The judges were laymen who knew little or nothing of the ailments of human life, and the indications of present or near future disease. All this has been changed, and no one is now accepted without an examination by a duly qualified physician. The form of medical examination contains a number of questions, one of the objects of which is to assist the examiner in determining the insurability of the applicant and his probable expectation of life. There appears to be a mistaken idea with some examiners, in that they consider their duty performed when answers are given to the questions propounded. This is not the case; it is the examiners' duty to probe beyond the mere formal questions if they do not happen to elicit the information desired.

I think I can say, without fear of contradiction, that life assurance companies, as a whole, contribute more to the incomes of the medical practitioner of this continent than any other employer. During 1903 I estimate that the profession in Canada received from our life assurance companies for medical examinations of applicants about \$300,000. In this I have not considered the large amount which is paid by fraternal and benevolent societies for the examinations of their candidates. In the United States the figures will be much larger—not less, I believe, than \$5,000,000. These are large sums and indicate at least two things: (1) The increasing importance of life assurance in the community, and (2) the increasing influence of the medical examiner.

As a rule, medical men are men of high character. It is not advisable to have too many medical examiners in any one place. This is most satisfactory to the head office, and effectually prevents the agent from employing outside examiners; and, besides, what is everybody's business is nobody's business, and I know from experience that when this rule is followed the medical men take a greater interest than they could from the examination of a casual applicant. They become identified with the company for which they are working, and another fact I wish to impress upon the younger members of the profession who may be present, that so long as they do their work faithfully and honestly they will be defended by the head office, and not be subjected to the whims and petty annoyances of those who are often incompetent to form an opinion.

#### MEDICAL EXAMINERS.

The selection of a medical examiner for a life insurance company is not made without very careful consideration. There are certain qualifications that are absolutely necessary for an examiner to possess in order that he may fulfil his duties with credit and honor to himself and the company he represents. It is not essential that he be a "specialist" in any particular branch of the profession; he should, however, have professional ability and high moral character, as well as some experience. He must not only be well-posted in his profession, but he must be a keen observer of character, possessing wisdom and discretion, neither too light nor too grave, too familiar or too distant; he should be incorruptible and unflinching. His professional attainments alone are not the most important qualifications of a medical examiner. He should be quick to detect imposition, courteous, combined with firmness and decision.

The condition of mind of an applicant for insurance is quite different to that of an ordinary patient; the latter is always ready, willing and anxious to give all the information he may possess relative to his condition; yea, exaggerating his symptoms, thus necessitating the physician weighing everything before forming an opinion. The applicant oftentimes withholds and denies important facts in regard to his family and personal history, and the statements of such a party must be carefully analyzed and considered by the examiner, as well as all other information that can be possibly acquired, before a proper opinion can be offered as to the eligibility of the applicant for insurance. Let it never be overlooked that the medical examiner is the representative of the company employing him, and not the representative of the agent or the man seeking insurance. He is paid his fee by the company no matter whether the applicant is accepted or rejected. In giving his opinion, therefore, the first consideration must be the company. The question arises as to the value of a risk—is he a good risk, or is he a bad one? Now health, strictly speaking, is a relative term, and, therefore, we must not approximate it from tabulated experience. We must form our opinion after having made our examination of the family history and the condition of the applicant himself, including occupation, environment, etc., and as to the probability of the man living to his expected time. On the other hand, there are certain diseases or conditions which either entirely preclude insurance, or which will only allow an assurance on some modified plan. These conditions may relate to the applicant himself, to his ancestors, or surroundings, including occupation and habits. Hence, we have classified risks into those that are insurable at ordinary rates, those that are conditionally insurable, and those that are not insurable on any terms. For instance, a person suffering from consumption or other serious disease, or following an occupation dangerous to life, or whose habits of life are vicious, or whose family history is very weak, as a rule, is not insurable.

I would like to say a few words about the relation existing between medical examiner and agent. The medical examiner should always bear in mind that the agent who procures the application is entitled to consideration. He has to work hard, in most instances, to get applicants, having frequently to overcome prejudices, competition and other obstacles. The medical examiner should on all occasions where it is possible accommodate the applicant and agent as to time and place of examination. If this be not done, serious loss frequently result, not only to the

company, but also to the agent, who has devoted much time and expense in procuring the application. In these days of competition it is essential that the examiner be not indifferent to the actual conditions existing. When possible the agent should bring the applicant to the doctor's office; if he cannot induce the applicant to do this, the examiner should not allow the case to be lost because of his neglect to visit him in his own quarters. I speak from a long experience in life insurance, that by mutual concessions and courtesies, there should be little or no difficulty in procuring a fit time and place for the medical examination.

The money consideration is not small, and it has some important features connected with it. The fees received from the regular life companies are fairly remunerative and are always paid promptly. Some medical men object to a classified fee, but they must bear in mind that it is impossible to pay the same fee for \$1,000 insurance as for \$5,000 or \$10,000. In these days of close competition every dollar spent is calculated, and at the end of the year makes quite a difference. It is notorious that a great number of medical men make examinations for assessment societies and fraternal orders, and other contract practices, at a far less fee than the examination fee of the ordinary life insurance company.

Although the agent's commission seems very high, and is, still the habit is so common of making rebates in order to obtain business that the agents, as a rule, are not as well off at the end of the year as when they only received one-half the amount of commission that they receive at the present time, which is generally due to the fact of rebates which are so common, and, I think, that the companies have just cause in endeavoring to get our Legislature to forbid such practice, and make the taking of a rebate a punishable offence. This would be far better for the applicants, as well as to the interests of all concerned, if it were faithfully carried out.

The importance of life insurance has been recently prominently brought forward before the teaching bodies in our medical faculties, and most colleges make it a part of their curriculum that a short course of life insurance should be included, and I am glad to say that at a recent meeting of the College of Physicians and Surgeons of Ontario this suggestion was considered, and, I think, approvingly.

The growth of life insurance in Canada during the past twenty-five years may be said to be phenomenal. Let us consider for a moment the tremendous strides made. In 1878 the new insurance effected by all companies—Canadian, British, and

American—amounted to but \$12,000,000. Last year, or in 1903, the figures reached \$62,000,000, or an increase of \$70,000,000, in the comparatively short period of twenty-five years; but not only has the yearly volume of new business made great gains, but the total aggregate insurance in force has increased with leaps and bounds. At the same time, 1878, we find that the aggregate insurance carried by Canadians in our regular companies reached \$85,000,000; now, at the close of 1903, these figures have been increased until they reach no less than \$348,000,000. The amount invested by Canadians in life insurance is also interesting, and to many will, no doubt, be astonishing. Twenty-five years ago the amount of insurance premiums aggregated \$2,600,000; in 1903, they totalled \$18,200,000, or just about seven times what they did twenty-five years ago. I mention these facts to you, not only to indicate the growth in the past, but to allow you to imagine the tremendous proportions to which life insurance is likely to reach in the next quarter of a century.

In conclusion, gentlemen, I thank you for the attention which you have been pleased to give me, and when I look over the list of names of those who are to speak on the subject, I am sure many valuable suggestions will be made, and I do not think it advisable to dwell on the subject further.

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### THE INFLUENCE OF THE PLAN ON THE ACCEPTANCE OF RISKS FOR A LIFE INSURANCE COMPANY.

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BY PERCY C. H. PAPPS, A. I. A.,

Actuary of the Manufacturers Life Insurance Company.

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*Mr. President and Gentlemen,—*—In the early days of life insurance the acceptance of risks lay almost entirely with the Board of Directors. It is said that the old test of the fitness of an applicant was a walk around the board-room table. If the directors considered the applicant to be a healthy looking individual, his application would generally be accepted.

In course of time the board of directors called in the assistance of the medical directors, who eventually relieved the board of practically all responsibility in regard to the acceptance of risks. The medical directors, in their examination of cases, laid

before them, often feel that an applicant can hardly be accepted on the plan of insurance applied for, but believe that he would be safely insurable on some other plan. It is then that the actuary is called upon to combine his knowledge with that of the medical directors, in order that the combination of medical and actuarial knowledge may determine the terms upon which the insurance may be granted.

Needless to say, it is not my purpose to try to tell a body of medical men anything about the acceptance of risks from a medical standpoint, but I will endeavor to give a brief account of the acceptance of risks from the standpoint of an actuary.

In order to understand the effect of the plan of insurance upon the acceptance of risks, it is necessary that we should know something of the fundamental principles of insurance. I am aware that the medical directors and many of the local medical examiners have a very fair knowledge of insurance; but in order to be on the safe side, I will endeavor to explain, as briefly as possible, some necessary points.

Insurance may be granted under what is known as a yearly renewable term policy. Under such, the insurance is granted from year to year at a constantly increasing premium; each premium being just sufficient to cover the cost of the insurance during the twelve months following the payment of the premium. The premium will be comparatively small when the insurance is first effected, but it will increase each year, so that, if the life lives to old age, the premiums will eventually become prohibitory.

A more popular plan is what is known as the whole life policy. Under this plan, premiums are payable each year, during the life of the insured, and the insurance becomes payable upon his death. The premiums in this case are level premiums, that is, they do not increase or decrease. During the early policy years the premiums paid are more than sufficient to pay for the cost of carrying the risk, and the balance is each year set aside and forms what is known as the "reserve."

There are several ways of looking at the question of what this reserve is. For our present purpose I would ask you to consider that, when the first premium is paid, a portion of that premium is set aside towards reserve, so that the amount at risk the first year is the difference between the amount of the insurance and the reserve. When the second premium is payable the reserve is increased, and consequently the amount at risk is diminished. In this way, although the cost of providing a certain amount of insurance increases as the life gets older, the

otherwise steadily increasing cost is kept down, owing to the fact that the increasing reserve reduces the amount at risk. This reserve, under a whole life policy, increases with the age of the policy, until, finally, if the life lives to the oldest age shown by the mortality table, the reserve equals the amount of the policy.

The reserve varies greatly according to the plan of the policy. A one-year term policy provides insurance for one year only, and there is consequently no reserve. The reserve on a five-year term policy only amounts to a few cents per thousand insurance the first year, increases to a maximum at the third year, and vanishes at the end of the fifth year. On the other hand, the reserve on a ten-year endowment insurance, increases each year and amounts to the full face of the policy at the end of the ten years.

This short account of what is meant by the reserve on a life insurance policy will enable us to understand, that the amount which a life company has at risk under any policy is not the face value of that policy, but the difference between the face value of the policy and the reserve on it and since the reserve depends upon the plan of the insurance, the amount at risk does also.

When an application is received for a policy on a certain plan of insurance, we must, therefore, consider what the reserve on that policy will be from year to year. We can then tell what amount will be at risk each year, and can thus form an opinion as to whether the plan is one upon which the insurance can be granted. If we consider that there is too much at risk around those ages at which we suspect that there may be an excessive rate of mortality, we must change the plan to one which shows a small amount (if any) at risk around the dangerous ages.

For example, let us suppose that an applicant is applying for a whole life policy at age 35, and that there is a strong tendency to, say, cancer in the family history. It would be felt that while the life was insurable at ordinary rates for the next twenty years, it would be well to get off the risk around age 55. In such a case the whole life policy would be refused and a twenty year endowment insurance offered. In this way the policy would mature before the life reached the age when the extra mortality would be expected.

If it was thought that there was only a slight tendency to cancer a twenty payment life policy might be offered. In this case, although the policy would not mature at the end of the twenty years, still, as all the premiums would have been paid

in by that time, the reserve on the policy would be considerably higher than on the whole life policy, and the amount at risk at the end of the twenty years would consequently be less.

On the other hand, if there was a history of tubercular trouble in the family, and the applicant was of good physique, a policy would probably be granted on the whole life plan; but as, on the average, a heavier mortality would be expected in the early years of the policy, owing to the tubercular history, a lien or contingent debt would be placed upon the policy remaining level for perhaps five years, and then running off in equal instalments during perhaps the next ten years. If the life dies during the first fifteen years from any cause other than accident, the amount of the lien standing against the policy at the date of the death of the insured, would be deducted from the face of the policy in paying the claim. In this way only the poor lives pay any extra premium, and this is one of the strongest arguments in favor of the lien system.

The British practice of meeting the case of a sub-standard life of, say, 35 years of age, who applied for a whole life policy, is to accept the life and grant a policy on the plan applied for; but the policy would be issued at a premium as for a life aged perhaps 40 years, instead of 35. This is what is meant by "rating up a life five years."

A moment's consideration will show that the method of rating up lives a certain number of years, provides for an increasing extra mortality. This plan is only satisfactory in certain cases where an increasing extra mortality is expected, and it is now very seldom, if ever, used in Canada or the United States.

So far as we in Canada are concerned there are but two methods generally in use for the acceptance of sub-standard lives. The first is that of changing the plan of insurance: the second is that of imposing a lien. We might add a third which is simply a combination of the two just mentioned.

A method now used by at least one of the big American companies is that of issuing policies to sub-standard lives at the regular with profit rates of premium, but the policies are placed in a special deferred dividend class. The profits, which will be paid on those policies, will depend upon the rates of mortality experienced by the policies in that class. Needless to say the formation of a special class for sub-standard lives, would only be feasible where the business of the company was sufficiently extensive to warrant there being a sufficient number of lives in the special class to give average results.

I might give some actual examples of the application of the lien system, or of changing the plan of insurance, but the two or three cases I have mentioned will illustrate the principles to be followed. The amount of lien to be imposed in any particular case can only be learned by experience, and is, to a great extent, a matter of guess-work. We have not at the present time any statistics to tell us just what extra rate of mortality we may expect in every case of doubtful family history, etc.

It may be well to point out that, while the imposition of a lien will cover some cases, and the changing of the plan will allow us to accept other cases, still, the imposition of a lien is not equivalent to changing the plan, nor *vice versa*. If a man applies for a whole life policy, and the medical board offers the applicant his choice of a whole life policy subject to a lien of 50 per cent. of the face of the policy, decreasing by  $2\frac{1}{2}$  per cent. for twenty years, or a twenty-year endowment policy without any lien, one of the offers would be improper in most cases. If the extra mortality is expected in the early policy years, the life policy with the lien covers the case; for if death occurs in the early years the lien is deducted from the face of the policy when paying the claim, and if the insured lives beyond the ages when the extra mortality is expected, the policy will then be free from debt, and on the same footing as any similar policy granted to a first-class life. The twenty-year endowment policy does not cover an extra mortality in the early policy years, as the largest amounts are at risk in the first years, and there is nothing at risk in the twentieth policy year. If the mortality in the later years is expected to be heavy, the twenty-year endowment fits the case; for, as just mentioned, the amount at risk is greatest in the first year, and it gradually decreases, so that finally there is nothing at risk in the twentieth year. The life policy, subject to a lien, will not cover the case where a heavy mortality is expected in the later years, as by that time the lien will have run off.

Occasionally a life is so much below the standard that it is not insurable on any ordinary plan. The actuary will then very often endeavor to arrange some special plan that can be safely offered. The offer of a modified plan is apt to cause much less annoyance to the agent and the applicant than a simple refusal to accept the application. A twenty-year pure endowment policy with the return of the premiums paid in the event of death during the twenty years, is an example of a special plan that can be offered to a decidedly poor risk. If the applicant lives for, say,

ten years, the company has the interest on the premiums paid, which will be sufficient to offset the expenses, provided the commissions are properly adjusted. If the applicant lives to the end of the twenty years, the full face of the policy is payable. Under this plan, therefore, the company can lose very little by the early death of the applicant, and he will have the satisfaction of maturing his investment if he lives to the end of the twenty years.

Apart from sub-standard lives, we have cases of lives which are first-class from a medical standpoint, but which, on account of being engaged in a hazardous occupation, require to be carefully dealt with by the actuary. An extra premium, varying from \$2.50 to \$10 per \$1,000 insurance is usually imposed to cover the extra risk caused by hazardous occupations. Some companies accept lives engaged in hazardous occupations at ordinary rates, and place these policyholders in a separate class, where the dividends will depend on the mortality actually experienced in that class.

I must now refer to one investigation which will, no doubt, have an effect on the acceptance of risks, namely, what is known as the "Specialized Mortality Investigation." This is the experience of thirty-four Canadian and United States companies, upon ninety-eight special classes of risks, which was compiled by the Actuarial Society of America. A mortality table, which was thought to fairly represent the mortality of standard lives in America, was chosen as a basis of comparison for the results of each of the classes. The ages at entry were grouped into four classes. Ages 15 to 28 were referred to as young entrants; 29 to 42, mature entrants; 43 to 56, elderly entrants; and 57 to 70, old entrants. The experience is also divided into the first five years of insurance, and from the sixth to the thirtieth years. Roughly speaking, the first group of years will include those where the mortality will be comparatively light, owing to the effects of the medical selection; and the second group will contain the years after the effects of selection have worn off.

As the result of the investigation of the mortality of these various classes is very interesting, I will now quote from the report of the Committee of Actuaries, who had charge of the investigation:

Lives insured for \$20,000 or more on one application, notwithstanding the care always taken in the selection of such risks, have shown a heavy mortality, except at young ages at entry, the old entrants being the worst lives.

Lives insured for smaller amounts than applied for have turned out to be bad risks; while persons insured on a different plan than the one applied for, so as to require the payment of a higher rate of premium, were much nearer the normal.

Men born in Germany were good risks at young ages at entry, but poor risks at older ages at entry.

Persons born in Ireland proved poor risks during the first five years of insurance, but good risks after that time. The difficulty would appear to be one of circumstances rather than race, and the matter needs further investigation.

Lives born in Sweden and Norway have been excellent risks.

Colored persons show up well after being insured five years, but poorly during the first five years. It must be remembered that great care has been taken in the acceptance of these risks.

Army risks in time of peace have not proved satisfactory.

Officers in the navy have proved unsatisfactory at all ages.

Civil officers, such as sheriff, marshal, police constable, etc., show unfavorable results, except upon old entrants.

Members of paid fire departments in cities have been unfavorable risks.

Physicians show an improvement over earlier statistics. Those insured below age 43 have proved good risks, but the result has been unfortunate upon physicians insured at ages over 42. These remarks apply both to the earlier and later years of insurance.

Lives exposed to electricity, engaged in sawmills, working in iron and steel at high temperatures, house painters, printers, tailors, butchers, and meat dealers, travelling salesmen, such of them as have heretofore been accepted for life insurance, have been good risks, in spite of the supposed hazardous nature of the occupations.

Steel grinders and glass workers have proved unprofitable risks.

Potters are on the whole favorable.

Laborers show a heavy mortality, except at young ages at entry.

Contractors are good risks at young ages at entry, poor risks at older ages.

Lives engaged in theatrical occupations exhibit a very high mortality.

Cattle dealers and drovers have proved no worse than the average, excepting the old entrants.

Hotel-keepers, not attending bars, and wine and liquor dealers, who warranted it to be true that they were total abstainers, have proved to be poor risks. Those dealers who did not warrant that they were total abstainers have proved to be still worse risks, while still worse, on the whole, are the brewers and their employees. On the other hand, distillers and their employees may almost be regarded as good risks, at least during the early years of insurance, the experience being less favorable after five years.

Railway passenger conductors show a mortality only slightly above the expectation. Railway express messengers exhibit favorable results, and railway mail clerks have been excellent risks.

In gathering statistics of railway passenger trainmen, only those lives insured since 1890 have been taken, in order to exclude those lives operating trains not fitted with modern appliances. The results of the limited experience taken have been decidedly bad.

Locomotive engineers show bad results, while locomotive firemen are still worse risks.

Bad results have been experienced upon officers of ocean steam-vessels; while the losses upon officers of sailing vessels on ocean or Great Lakes have been still more heavy. The losses upon seamen and fishermen have not been excessive, except for young ages at entry. The small class of pilots has turned out well.

Lives who have been accepted for insurance notwithstanding an intermittent or irregular pulse have proved to be good risks at the younger ages, but not so good at the older ages.

Those who have been accepted with more or less doubt, notwithstanding a pulse rate below sixty per minute, have proved to be extraordinary good risks at all ages of entry and for all durations of insurance.

Lives who have been insured after having reformed from intemperate habits show bad results, notwithstanding the extreme care taken in the acceptance of these risks.

Asthmatics appear to be good risks, except at the older ages of entry.

The care with which medical selection has discriminated against risks giving a recent history of inflammatory rheumatism, is witnessed by the results. Those who have had one attack have proved to be fairly good risks, except as regards older entrants, while those who have had more than one attack

have not been satisfactory risks, except as regards young entrants.

The mortality amongst lives showing a record of gout is only slightly excessive within the first five years of insurance, but is afterwards nearly double the expectation.

Applicants showing a history of syphilis show an almost equally bad record.

Contrary to expectation, those who have had otorrhea appear to be good risks.

Those who have had hepatic colic show a favorable mortality, except for old entrants.

Those who have had renal colic, calculus or gravel, have proved good risks at young ages at entry, but poorer risks for mature and elderly entrants, and bad risks for old entrants.

Those who have had inflammation of the bowels, peritonitis or appendicitis, have been decidedly good risks for young entrants, and the elderly and old entrants are only slightly worse than the average.

Where there has been a record of blood spitting the old entrants have been good risks, the mature and elderly rather bad, and the young decidedly bad.

Persons who have had disease of the hip-joint have been bad risks at all ages.

Dyspeptic entrants, at the old ages, have been moderately bad risks. All others show good results, except the young entrants of light weight.

With the exception of young entrants, all classes of extra heavy risks have proved most unsatisfactory. Young entrants, whose parents have reached the age of 70 years, are distinctly good. Young entrants, for whom one parent, at least, has been noted as dying below 70, and young entrants having a greater girth of the abdomen than of the chest expanded, appear to be fair average risks. Omitting the young entrants, extra heavy weights have had a mortality slightly greater than 50 per cent. above the expectation, with the exception of those whose parents have both reached the age of 70 years, where the mortality has been slightly less than the above figure.

Those lives classed as heavy weights, though not as heavy as the lives just mentioned, have shown exactly similar results, but the extra mortality has not been as high as in the case of the extra heavy weights.

Lives of ordinary weight, whose parents have both died below 60, have been fairly satisfactory for young entrants, but unsat-

isfactory for older ages at entry. Lives whose parents have both attained the age of 75, have proved to be good risks.

In lives of standard weight, where at least one parent has died below 70 of phthisis, the results have been good. The same is true, where, at least, one parent has died below 70 of some form of kidney disease, except that the elderly entrants of this latter class have not done well after five years. Where one parent has died below 70 of heart disease, the results have been good, except that the elderly and old entrants appear to be worse after five years. Where one parent has died below 70 of apoplexy or paralysis, the results have been good for young entrants, but not so favorable for older entrants.

In cases of light weights, the results, on the whole, have been quite favorable. Where, at least, one parent has died below the age of 70 of any kind of disease of the lungs, the young entrants have been decidedly bad risks, the entrants of other ages have proved good risks. All other light weights have proved to be uniformly good risks.

Persons over six feet three inches' in height have been good risks for young ages at entry, but bad risks for older ages; and unusually short men have shown similar results.

Where any near relative has died of cancer, the results have been good, except at older ages at entry.

Persons who have had any near relative develop insanity have been good risks, except for the elderly entrants, who show an excessive mortality after five years.

The remaining classes of lives consist of persons insured in select counties of the United States.

The committee points out that care should be exercised in drawing any conclusions from these results. They state that: "One necessary warning cannot be expressed too strongly. It must not be forgotten that the facts herein given relate to the respective classes of risks among lives selected for insurance, and do not relate to the same classes among the general population.

"For example, it is not conceivable that among the general population, those who have had, at least, one parent dying of consumption, are above the average of the others in vitality. If this is found to be the case as regards that particular class of insured lives, it indicates only that such persons of that class as have actually been accepted for insurance have been selected so carefully that, on the whole, those only have been accepted who

are peculiarly good representatives of the class. If, on the other hand, the results appear only moderately bad upon a class of risks heretofore accepted with great circumspection, it is to be inferred that had such circumspection not been exercised the results would have been still worse. This warning must be borne in mind as applying and intended to apply to each one of the classes under consideration."

In conclusion, Mr. President and gentlemen, let me thank you for the honor which you have done me, in inviting me to prepare this paper, and I trust that it has not been altogether uninteresting to those present.

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## THE FINANCIAL RESPONSIBILITY OF THE MEDICAL EXAMINER FOR LIFE INSURANCE.

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BY BRUCE L. RIORDAN, M.D.C.M., TORONTO, ONT.

Medical Examiner North American Life Assurance Co.

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*Mr. President and Gentlemen.*—The position of a medical examiner for a life insurance company is a confidential one, and it is the duty of the examiner to discharge all his obligations in this respect to the company, carefully, fully, honestly, and to the best of his ability. While one examiner may be more able to discharge these duties with more skill and competency than another, it is only where negligence can be shown that there is any liability on the examiner from a legal point of view. If the medical examiner discharges his duties to the best of his ability, and exercises due care and precaution, and discloses all information received from the applicant, and carefully records the answers, as they are given to him, to the various questions asked, using his best judgment as to the information which he himself furnishes to the company, his duty is performed, and there is no financial liability upon him in any way to the company, or to the applicant.

It has been decided in the courts that the medical examiner is the agent of the company for recording the answers of the applicant.—*Grattan v. Mutual Life Insurance Company*, 80, N.Y. 281; 92, N.Y., 274. Therefore, it becomes very important that the medical examiner should be a man skilled in his profession,

and of undoubted honesty and probity, as his report would be receivable as evidence against the company, unless in those cases where it could be shown by the company that he was guilty of fraud and deceit, in withholding material facts, either of his own accord, or at the request of the applicant for insurance.

The medical examiner is not the agent of the applicant for insurance.—*Hollman v. Life Insurance Company*, 1, Woods, 674. The facts concealed or misrepresented by the examiner must be material to the contract. If he misrepresents, or does not disclose the correct answers of the applicant, the company is responsible for any damage resulting from such irregularity of the examiner, and there is no doubt that in the event of such irregularity being proved, the examiner would be responsible for the financial loss or damage suffered by the company that may have resulted from such concealment or negligence.

There, however, have been contrary opinions held in cases where the form of application makes the examiner the agent of the applicant, *i.e.*, where the statements contained in the form are declared or warranted to be true, and in one case where such statement was false, and was written therein by the medical examiner of the company, the policy was declared void.—*Sternaman v. Metropolitan Life*, 63, N.Y., S., 674 (1900).

The relationship between the company and medical examiner should be one of trust, and such position should be occupied by one who is recognized as being a man of undoubted honesty, skill and thoroughness in the discharge of his duties. In many cases the company may suffer considerable loss in case his obligations are not discharged properly. It has already been decided in the *Provident Savings Life Assurance Society v. Rutlinger*, 58, A.R.K., 528, and other cases, that where the medical examiner fills in false answers to questions, which are otherwise answered by the applicant, but without the applicant's knowledge, and then procures his acknowledgment to the application in writing to these questions (by applicant's signature), the company nevertheless is bound and cannot have any recourse under the contract against the insured, but in such case would have an action against the examiner for any damages it may suffer in connection with the contract.

The examiner who writes in false answers in his report may be liable for criminal prosecution, and in many of the states there are provisions imposing a penalty for any such breach; notably in the State of Michigan, he is liable to a fine, not exceeding \$1,000, or imprisonment not exceeding three months, and

shall be liable to the company in an action on the case for the full amount of any insurance obtained from such company by means of, or through, such false report.—(See Michigan Revised Statutes, Sec. 4,235.)

A medical examiner is recognized as the agent of the company only as to that part of the application which he is required to write (Leonard v. State Mutual Life Assurance Company, 31 *Law Insurance Journal*, page 584).

The financial responsibility of a life insurance examiner is, therefore, an important question with the company, and an important obligation is assumed by the medical man who examines applicants for insurance.

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#### DISCUSSION ON SERIES OF LIFE INSURANCE.

DR. J. L. DAVISON (Toronto, Imperial Life).—While it may be true that adolescence is especially the age of tuberculosis, and old age that of cancer, yet it must be emphatically understood that no period of life is exempt from tuberculosis. Concerning the influence of heredity on cancer, at the present day not much attention is paid to it; the report of the recent German Committee of Investigation being that cancer is not hereditary. In regard to syphilis, I hold that three years of active treatment, as advised by Jonathan Hutchinson, is the only safe method. The patient should not be considered cured until he has remained free from symptoms for a period of ten years, and even then we cannot be certain of complete safety. Examining physicians should be more careful of their reports, and should not hesitate to write confidential letters to the medical director explaining obscure points. As to the examination of the blood vessels, any degree of sclerosis, or visible pulsation in the radial, is of great importance; often of more importance than the existence of a heart murmur.

DR. MACHELL (Toronto, Crown Life) suggested that owing to the excellence of the papers and their importance to practitioners in general, they should be published in book form and distributed to members of the Association.

DR. FERGUSON (Toronto, Excelsior Life) held in regard to syphilis that Sir William Gowers was right. "It damages the vitality of the system, and paves the way for the entrance of other diseases, such as tabes, aneurism and paresis." The descendants of long-lived parents are not necessarily good risks.

Alcoholism is an evidence of neurosis, 50 to 80 per cent. of neurotics having alcoholic tendencies. In reference to tuberculosis, I hold that without the seed there is no crop. The nature of the soil is also important; some soils being much more favorable to the growth of the germ than others. The following points are important: (a) Family history; (b) personal condition; (c) past history; (d) collateral influence of occupation, habits, etc.

DR. HAY (Toronto, People's Life) emphasized the importance of completely exposing the chest. In a recent case, a woman objected to exposing the chest, and upon insisting, he discovered that one breast had been removed for malignant disease, and the other one showed infection also. The woman was even at that time under the care of a surgeon who proposed to remove the remaining breast.

DR. OLDRIDGE (Toronto) considered that some cases of mitral regurgitation, with good compensation, were as deserving of acceptance as were many other cases which were shoved through; moreover, that a man operated on for appendicitis with a good, clean, well-healed scar should be accepted without difficulty.

DR. FREEL (Stouffville).—We have heard much good advice from the medical directors, but I would like to speak a word in behalf of the unfortunate examiners. (Applause.) The difficulty of getting correct answers cannot be over-estimated, especially is it almost impossible to get accurate information concerning the habits and history of the applicant.

DR. BRITTON (Toronto) considered that the examiner who was on the spot and frequently personally acquainted with the applicant, was in a much better position to judge of the accept ance of the risk than the medical referee. He considered that the referees should pay more attention to the examiner's answer to that question.

DR. HUNTER (Parkdale) considered that the pay was much too small for the trouble to which the examining physician was oftentimes put. Recently he had made three attempts to examine an applicant, and on the occasion of his third visit the man informed him that "he hadn't time to be examined then, as his wife had some friends in to a card party."

DR. BRYANS (Toronto) wanted to know if it was true that some physicians in Toronto were examining applicants for life insurance at 25 cents apiece.

DR. SCADDING (Toronto).—It was true that the doctor was

not sufficiently paid in some cases, but the applicant paid the doctor's fees, and in many cases these were poor patients, who could not afford to pay more. Moreover, the fees were cash, with no difficulty in collecting accounts.

MR. PAPPS.—If the doctors are not sufficiently paid, it is largely their own fault. There are physicians who are willing to accept the present fee, and as long as the company could get the services of such men, they could not be expected to pay more.

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## Reports of Societies

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### WESTWARD HO!

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CANADIAN MEDICAL ASSOCIATION, VANCOUVER MEETING, 1904—AUGUST  
23, 24, 25 AND 26.

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SIMON J. TUNSTALL, M.D., PRESIDENT.

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#### VANCOUVER AND VICTORIA.

The thirty-seventh annual meeting of the Canadian Medical Association is to be held this year in Vancouver on the above dates. Victoria joins hands with her sister city in extending the hospitality of the Pacific Province to all the members of our great National Medical Organization. In the thirty-seven years of its history this is the first time a meeting of the Canadian Medical Association has been held in British Columbia; and the opportunity to visit Victoria, an outpost of Empire, and Vancouver, the pride and glory of the West, should not be lightly passed by. Indeed, the entire West is a "panorama of beauty" and a "scene of bustle."

#### HOW TO GET THERE AND HOW TO GET HOME AGAIN.

There will be no special train. No arrangements are in force to return *via* California, Salt Lake City and Colorado, as none could be secured, so far as the Canadian Medical Association is concerned, but below will be found information which will cover that route in returning, same being an open rate not requiring any special certificate for purchasing transportation. Under the arrangements made tickets will be good going *via* Canadian Pacific Railway direct, *via* Port Arthur, *via* Sault Ste. Marie, St. Paul,

thence Soo-Pacific Route, Great Northern or Northern Pacific, or Grand Trunk *via* Detroit or Port Huron to Chicago, St. Paul, thence Soo-Pacific Route, Great Northern or Northern Pacific, returning same route or any of the above routes. Lake route, Owen Sound to Port Arthur, may be taken one or both ways on payment of \$4.25 additional each way. Boats leave Owen Sound, Tuesdays, Thursdays and Saturdays.

It is also proposed to allow variation to St. Louis *via* St. Paul and Chicago on return trip when tickets are routed on return trip *via* those points, on payment of \$10.00 additional. Secure return tickets if return is to be made other than Canadian Pacific Railway *via* the Northern Pacific to St. Paul; Chicago and Northwestern, from St. Paul to Chicago; Wabash, Chicago to St. Louis or Chicago to Detroit, either Wabash or Grand Trunk; Illinois Central, Chicago to St. Louis and return. Through sleeping car accommodations from St. Louis *via* Chicago to all points in Canada on Grand Trunk Railway; or from St. Louis *via* Wabash to Detroit direct, or to Chicago and thence to Detroit.

#### MARITIME PROVINCES.

The Intercolonial Railway joins in the arrangements in force for the Maritime Provinces and also in Quebec.

#### MANITOBA, NORTH-WEST TERRITORIES AND BRITISH COLUMBIA.

Transportation arrangements are as follows: To Vancouver and Victoria, from Port Arthur, Fort William, Rat Portage, \$50.00; from Winnipeg, Emerson, Gretna, Portage La Prairie, Brandon, Indian Head, Winnipeg to Boissevain, Winnipeg to Carroll, Brandon to Hartney and Weyburn to North Portal, \$45.00; Rapid City Junction, \$45.85; Gladstone, \$46.05; Neepawa and Minnedosa, \$46.85.

The above blankets pretty nearly all of the important points in Manitoba, but to make rates from points not shown above the one way first class rate to the nearest point shown is to be added, but not to exceed the rate from a point more distant on the direct line. From points in the Northwest Territories and British Columbia, Qu'Appelle and West round trip tickets to Vancouver and Victoria will be issued at single fare. Passengers ticketed at stations Medicine Hat and east, have the option of going *via* the Main Line, and returning Crow's Nest, or *vice versa*, as they may decide when purchasing their tickets. Tickets will be issued to either Vancouver or Victoria, where the same rate applies to either place; but if, as is the case from some far Western points,

the rates are higher to Victoria than to Vancouver, then tickets to Victoria will be issued only at the Victoria rate.

## RATES.

## Ontario—

Sault Ste. Marie, Sudbury, North Bay .....	\$62 40
Orillia, Allandale, Beeton, Toronto Junction, Parkdale, Streetsville Junction, Cardwell Junction, Inglewood, Brampton, Brantford, Caledonia, Jarvis, Simcoe, Tilsonburg, Guelph, Galt, Georgetown, Hamilton, Milton, Drumbo, Berlin, Stratford, Woodstock, Beachville, Ingersoll, St. Thomas, St. Mary's, London, Harrisburg, Sarnia, Chatham, Windsor .....	62 40
Toronto .....	62 40
Harriston and Mount Forest .....	63 45
Southampton .....	65 05
Wiarton .....	65 35
Wingham .....	64 05
Goderich .....	63 75
Orangeville .....	62 85
Owen Sound .....	65 05
Peterboro' and Port Hope .....	64 40
Tweed .....	66 25
Kingston .....	67 70
Carleton Junction .....	68 00
Brockville, Smith's Falls, Perth .....	68 00
Ottawa .....	68 00
Cornwall .....	68 00

## Quebec—

Rockland .....	68 00
Montreal, Montreal Junction, St. Martin Junction .....	68 00
St. John's .....	68 00
Huntingdon via Montreal .....	68 00
Quebec Levis, Point Levi .....	71 00
Sherbrooke, Lennoxville .....	69 20

## New Brunswick—

McAdam Junction .....	76 50
St. John and Moncton .....	76 50
St. Andrew's and St. Stephen .....	76 50
Woodstock .....	77 00
Edmundston .....	78 70
Fredericton, Doaktown, Boiestown and Blackville, via Fredericton .....	77 20

## Nova Scotia—

Digby and Yarmouth, via St. John .....	77 50
Halifax, via D. A. Ry. ....	79 50
Halifax, via I. C. Ry. ....	81 00
Oxford Junction .....	78 95
Truro .....	80 00
New Glasgow, via Truro .....	80 75
Pictou, via Oxford Junction .....	80 45
Antigonish .....	81 45
Mulgrave .....	82 10
North Sydney .....	83 55
Sydney .....	83 70

## FARE EAST OF FORT WILLIAM.

From points not mentioned add \$50.00 to first-class one way fare to Chicago.

## DATES OF SALE OF TICKETS.

From all points in Ontario and Quebec tickets will be on sale from the 15th to the 21st of August, inclusive, and from points east of Vanceboro', Me., August 14th to the 20th. The final return limit is October the 23rd, which means that all must be home on that date.

## ENTERTAINMENT AT CALGARY ON WAY OUT.

The Calgary Medical Association is desirous of extending an entertainment during the course of one day on the way out to Vancouver. This entertainment will be a typical western one, and will take the form of an Indian gathering in costume, Indian races and games, roping and cowboy feats. Those who would like to stop over at Calgary for this entertainment so kindly offered through the Calgary Medical Association, should notify the General Secretary without any delay, so that if there would be sufficient number, same could be forwarded in time for proper preparation of the entertainment.

## THE SOCIAL SIDE AT VANCOUVER AND VICTORIA.

In Vancouver arrangements have been made for various excursions, yachting trips, steamer, rail and tram to surrounding points of interest; receptions, private and public; a dinner or a ball. On one of the days of the meeting the delegates will be taken by tram to New Westminster, visit the asylum there and other

points of interest, then take the boat down the mighty Fraser to Steveston, visit some of the canneries, so that visitors will have the opportunity of verifying the stories of the salmon industry; then take the train back to Vancouver—a trip of great interest from start to finish.

In Victoria a committee is arranging a series of entertainments there, viz., reception at Government House, conversazione at the Parliament Buildings, a visit to Esquimalt and William Head Quarantine Station, beside other excursions to points of interest in and about Victoria.

#### HOTEL ACCOMMODATION.

Vancouver Hotel .....	\$3 to \$5 per day.
Badminton .....	2 " 3 "
Leland .....	2 " 3 "
Commercial .....	2 " 3 "
Metropole .....	2 " 4 "
Dominion .....	1 " 2 "

Board and rooms can also be arranged for at private houses, a complete list of which can be obtained from the local secretary.

#### PULLMANS AND DINING.

The Pullman rate from Toronto to Vancouver is \$17.00 each way. Meals for five days about \$12.50.

#### YELLOWSTONE PARK.

Yellowstone National Park is situated mostly in the State of Wyoming, in its north-western corner. Those contemplating visiting this "Wonderland" after the meeting in Vancouver, should see that their tickets are routed on return journey *via* the Northern Pacific Railway. From Vancouver the return trip is made over the C.P.R. to the boundary where the Northern Pacific is taken at Sumas. Thence through Auburn and Spokane to Livingston, where change is made for Gardiner, at the entrance to the Park. A six days' trip by stage-coach through the Park, including meals and lodging at the hotels, which are all first-class, will cost \$49.50. The Park is sixty-two miles from north to south and fifty-four miles wide. The General Secretary will be glad to hear from all those intending to take in this trip on return journey, having been assured that a party of from twenty-five to fifty will receive better attention than smaller ones.

### RETURN THROUGH CALIFORNIA, SALT LAKE CITY AND COLORADO.

As announced above, the Canadian Medical Association has no arrangements in force for return *via* California. For the benefit of those, however, who wish to return that way to St. Louis, the information may be tendered that there will be in force at the same time as our own convention an open rate of \$70.25 from Toronto to San Francisco, good going *via* Canadian Pacific Railway to Vancouver, allowing liberal stop-overs in each direction; final return limit 23rd of October. No certificates are required for this trip, as it is an open rate to all. In taking this trip, members of the Canadian Medical Association going to Vancouver should be routed on return *via* Southern Pacific, Portland to San Francisco or Los Angeles; Southern Pacific, San Francisco or Los Angeles to Ogden; Union Pacific to Kansas City and St. Louis. Mr. H. F. Carter, T.P.A., Union Pacific Railway, 14 Janes Building, Toronto, will supply any further information regarding this route.

### MEMBERSHIP.

The fee for membership is \$2.00, and may be paid to the Treasurer, Dr. H. Beaumont Small, Ottawa, when registering at the meeting. For the information of those who have not been elected to membership, the same rates apply to them as well, and they are instructed to ask for application forms when registering.

### SPECIAL CERTIFICATES.

All delegates must have for themselves, their wives and daughters, if going, a special certificate from the General Secretary, in order to secure reduced transportation rates.

### FURTHER INFORMATION.

Should anyone require any further information as to accommodation at Vancouver or Victoria, side trips, hunting, etc., they will kindly address the local secretary, Dr. W. D. Brydone Jack, Vancouver, B.C. For certificates and general information address the General Secretary.

### PROVISIONAL LIST OF PAPERS.

- President's Address, Simon J. Tunstall, Vancouver.
- Address in Surgery, Mr. Mayo Robson, England.
- Address in Medicine, Dr. \_\_\_\_\_.
- Address in Gynecology, Dr. E. C. Dudley, Chicago.
- Paper, title to be announced, Dr. A. McPhedran, Toronto.

Paper, title to be announced, Dr. J. H. Elliott, Gravenhurst, Ontario.

"Surgical Treatment of Trachoma," Dr. G. Stirling Ryerson, Toronto.

Paper, title to be announced, Dr. A. Armstrong, Arnprior, Ontario.

Paper, title to be announced, Dr. A. E. Garrow, Montreal.

"The Operative Treatment of Spina Bifida," Dr. E. R. Secord, Brantford, Ont.

"The Business Aspect of the Medical Profession," Dr. James E. Hanna, Ottawa, Ont.

Paper, title to be announced, Dr. D. J. Gibb Wishart, Toronto

Paper, title to be announced, Dr. J. W. Stirling, Montreal.

Paper, title to be announced, Dr. B. E. McKenzie, Toronto.

"Hernia of Bladder Complicating Inguinal Hernia," Dr. Francis J. Shepherd, Montreal.

"Gastric Ulcer and its Treatment," Dr. J. B. McConnell, Montreal.

"La Syphilis Canadienne et Différents Facteurs et Gravité," Dr. D. E. LeCavelier, Montreal.

"Case Reports," Dr. Robert H. Craig, Montreal.

Paper, title to be announced, Dr. James S. Edwards, Grand Rapids, Michigan.

Paper, title to be announced, Dr. Henry Howitt, Guelph, Ont.

"Chronic Cystitis," Dr. J. O. Camirand, Sherbrooke, Que.

"Iniencephaly, with a Report of Three Cases," Dr. Maud E. Abbott, and Dr. F. A. L. Lockhart, Montreal.

"Actinomycosis," Dr. James Bell, Montreal.

Paper, title to be announced, Dr. Ingersoll Olmsted, Hamilton, Ontario.

"Prostatectomy Under Local Anesthesia," Dr. H. H. Sinclair, Walkerton, Ont.

"High Frequency Currents in Functional Disease, more particularly Functional Neuroses," Dr. S. F. Wilson, Montreal.

"Therapeutic Hints from Bacteriology," Dr. G. R. Cruickshank, Windsor, Ont.

Paper, title to be announced, Dr. C. H. Mayo, Rochester, Minnesota.

In addition there will be a number of papers from Western men, whose names have not yet been received.

Any further particulars required will be gladly furnished by the General Secretary,

# Dominion Medical Monthly

And Ontario Medical Journal

EDITORS.

GRAHAM CHAMBERS, B.A., M.B.

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GEORGE ELLIOTT, M.D.

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VOL. XXIII.

TORONTO, JULY, 1904.

No. 1.

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## THE SUGGESTIONS OF PRESIDENTS.

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Another president of a medical association in Canada has delivered himself of valuable suggestions, and another convention of medical men listened, applauded, tendered thanks, and, as usual, took no action thereon. This is scant courtesy, after electing a man to this distinct honor. No one seems to find it incumbent on him to follow up the many very valuable suggestions emanating annually from presidential addresses. Dr. Ross, in his annual presidential address before the Ontario Medical Association this year, touched upon many important items. He even asked for a special committee to investigate many matters, such as registration of births and deaths, the reporting of infectious diseases, working for the individual without compensation, and, what is infinitely far worse, working for the community or state for nothing. There is altogether too much officious charity in the medical profession—a calling which could be enhanced by a little more engraving of business principles. But there was no special committee, and all these matters stand over for another year. The medical faculty may well depend upon it that if they do not stand well together for their own good, not much will be accomplished. We have only to look to Germany at the present day to see how an united pros-

fession can successfully resist exploiting societies. Let us take our cue from the "Fatherland," renowned the world over for its steady, progressive and solid advance in medical science. If Germany can successfully conduct a campaign against lodge practice, surely Canadian practitioners have the energy and the manhood to uphold their own honor and integrity. We are laughed at and have become a reproach and a by-word so far as "business" is concerned. Surely it is time to put up a vigorous and honorable fight for ourselves and our families. What have we to do with the pains and pangs of those who prowl around after the good-hearted doctor and beat him out of his fee? The poorest man very often does not need a doctor for months at a time, and most of the so-called medical charity is directed towards hum-bugs and dead-beats. Every representative to our medical councils should feel it incumbent on him to organize the profession in his district into a business association, responsible to the provincial medical associations, and then let the maternal medical organization, the Canadian Medical Association, have jurisdiction over all. We need organization very badly, and very sadly. Let us all get busy.

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DOES—"OUR MEDICAL PRESS REQUIRE(S) CONSIDERABLE REGENERATION"?

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Coming from a man who has contributed many able articles to medical journal literature, that portion of the title of this editorial enclosed in quotation marks must cause those of us engaged in medical journalism serious thought and consideration. Had the words been uttered by a man who never has, never does, and never will, contribute anything to the medical literature of the day, the statement would not and need not have been noticed, because we deny the right to that individual to criticize. The medical man who never reports a case or some of his observations on any case of disease, who never sends to the medical press a prescription he has found useful, who never writes a paper, who never records an idea or a discovery, who never writes his opinion on any topic of medical politics, is scarcely competent to pass remarks upon the value of present-day journals. But these words come from a source, the utterance being from Dr. Ross, before the Ontario Medical Association, which commands thought.

We do not presume for one moment that Dr. Ross referred to Canadian medical journals exclusively, but that all came under his charge, big or little, weekly or monthly. Whilst we do not consider that our own particular medical press in Canada is by any means perfect, we do contend that in recent years our medical press has made good progress, no doubt due to new, young blood which has been introduced; and we fully believe that there is an earnest desire on the part of those engaged therein to do the very best possible for Canadian medical journalism and for the Canadian medical profession. In Canada there are yet two departments in medical journalism which are sadly neglected. *You cannot have good medical journals unless the practitioner helps to make them such.* How many are helping? The two departments which need building up are the especial field of the general practitioner—clinical reports and correspondence. We would like to see more reports of cases and more letters written to the editors upon such topics as from time to time come before the profession. The advice, however, is good; and we trust our readers and the readers of our contemporaries will bear it in mind, remembering that they have their part to play in the process of “regeneration.”

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#### PUBLISH ALL FORMULÆ.

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The many attacks made by the DOMINION MEDICAL MONTHLY and other medical journals throughout the land upon the all too numerous secret remedies upon the market, spoken of as cure-alls for every known disease under the sun, are bearing fruit. This is seen in the very laudable action of the Ontario Medical Council in their proposal to memorialize the Federal Government to order the formulæ of all patent medicine remedies printed on all labels on the bottles thereof. It is an undertaking that, having once put their hand to, there must be no turning aside or back. Of course, it will be shouted from the house-tops that the doctors are interested, selfishly so; but firm, aggressive insistence in the interests of the health of the community must prevail. There are not wanting signs that the whole and entire patent medicine fabric is tottering to its fall. Self-respecting newspaper managers cannot much longer cater to this class of advertising, and the first, we under-

stand, to step out and refuse some of it at least, is the *Montreal Witness*, which has always been a consistent advocate in the cause of temperance. It has recently refused to advertise an article said to have large quantities of alcohol in its make-up. With the powerful influence of temperance people denouncing alcoholism by the patent medicine route, many of these baneful preparations will vanish from the market.

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## NEWS ITEMS

DR. GEO. A. PETERS left Toronto on the 12th of July for England.

CANADIAN MEDICAL ASSOCIATION.—Remember the dates: August 23rd, 24th, 25th and 26th.

DR. J. T. FOTHERINGHAM has returned to Toronto from England very much improved in health.

DR. INGERSOLL OLMSTED, Hamilton, announces that hereafter he will confine himself to surgery and consultations.

DR. N. P. GRANT, of Woodstock, N.B., has been appointed Superintendent of the St. John General Hospital.

THE deaths in Ontario during the month of May were 2,283, the rate of mortality being 13.7 per cent. per 1,000.

HEALTH inspection of Quebec schools is being advocated by Dr. C. S. Valin, Professor of Hygiene in Laval University.

DR. R. J. MANION, gold medallist at Trinity University, '04, has been appointed to the house staff of the General Hospital, Ottawa.

OVER one hundred infants died in Montreal during the week ending the 2nd of July. The total death rate during that week was 186.

THE Hon. Senator Sullivan, of Kingston, has been elected President of the Ontario Medical Council, and Dr. A. A. Macdonald, of Toronto, Vice-President.

THE Provincial Royal Jubilee Hospital of Victoria, B.C., has just completed the Strathcona wing at a cost of over \$12,000, of which amount Lord Strathcona contributed \$5,000.

BATTLE & Co., St. Louis, Mo., have just issued the second of the series of twelve illustrations of the Intestinal Parasites, and will send them free to physicians on application.

DR. J. V. ANGLIN, of Montreal, has been appointed Superintendent of the Provincial Hospital for the Insane of New Brunswick, a position which was resigned by Dr. Geo. Hetherington some time ago.

SANITARIUM AT KAMLOOPS.—Dr. A. P. Proctor, of Kamloops, B.C., announces that a Sanitarium for Consumptives is to be erected at that point, and that the Canadian Pacific Railway has contributed \$5,000 for the purpose.

THE College of Physicians and Surgeons of Quebec held its annual meeting in Montreal during the week ending July 9th. Licenses were granted to fifty members of the profession who had not so far observed the necessary formalities.

PROFESSOR WILLIAM OSLER and Dr. Thomas G. Roddick, M.P., are to have conferred upon them by Oxford University the degree of Doctor of Laws during the course of the annual meeting of the British Medical Association in July at Oxford.

DR. TAIT MCKENZIE, of Montreal who is at present in Paris, head of the practical Anatomical Department at McGill University, has received an offer from the University of Pennsylvania to become Medical Superintendent of the College Gymnasium, and it is thought that Dr. McKenzie will accept.

CANADIAN MEDICAL ASSOCIATION.—We direct the attention of our readers to the announcement in other columns of the Thirty-Seventh Annual Meeting of the Canadian Medical Association at Vancouver. Nearly two hundred are going out. Why not be in the number?

PHYSICIANS desiring to sell their practice with the least publicity possible so as to safeguard their interests will find the Canadian Medical Exchange a medium for so doing that is unsurpassed. Dr. Hamill, who conducts this important department

of medical affairs, has rendered the profession signal service, and is undoubtedly well adapted in this line of business, and we cordially recommend our readers to secure his advice when they are thinking of selling. See his list of practices among our advertising pages.

THE French-speaking physicians of North America held their second annual conference in Montreal during the week ending the 2nd of July. Dr. Pozzi was present, representing the Medical Faculty of Paris, and during the progress of the conference this distinguished French surgeon performed operations in the Notre Dame and Royal Victoria Hospitals.

THE ONTARIO MEDICAL COUNCIL.—The annual meeting of the Ontario Medical Council was held in Toronto during the week ending July 2nd. The Board of Examiners appointed for the coming year was as follows: Descriptive Anatomy, D. McKay, of Oshawa; Theory and Practice of Medicine, Dr. Ryan, of Kingston; Midwifery, etc., Dr. McCabe, Strathroy; Physiology and Histology, Dr. A. Primrose, Toronto; Surgery and Operative, Dr. W. T. Parkes; Medical, etc., Dr. Middlebrough; Chemistry, etc., Dr. A. R. Pyne; Materia Medica, Dr. J. A. Sprague; Medical Jurisprudence, Dr. A. J. Sinclair; Assistant Examiner Surgery and Diseases of Women, Dr. R. Ferguson, London; Assistant Examiner, Clinical Surgery, Dr. O'Rielly, Toronto; 1st Assistant Medicine, Diseases of Children, Dr. A. Harg, Kingston; 2nd Assistant Examiner in Medicine, Dr. G. H. Field, Cobourg; Homeopathic Examiner, Dr. W. McFall, Peterboro.





J. F. W. ROSS, M.D., C.M.,  
PRESIDENT ONTARIO MEDICAL ASSOCIATION.

# Dominion Medical Monthly

And Ontario Medical Journal

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No. 2.

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## Original Articles

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### PRESIDENTIAL ADDRESS—TWENTY-FOURTH ANNUAL MEETING, ONTARIO MEDICAL ASSOCIATION.

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BY J. F. W. ROSS, M.D., C.M.,

Professor of Gynecology, Medical Faculty, University of Toronto.

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*Gentlemen.*—There are pinnacles to which we reach, only to be hurled down from the dizzy height into the valley below, to be hidden from the rude storms of the world, and where peace and quiet and easy-going hum-drum pervades the spot, while the green grass grows under the feet. This is the well-known valley of the "have-beens." Hills have only two sides, one going up and the other going down, and when one has reached such honor as you have conferred upon me, he has climbed the upside and must begin the descent. One is elated with the honor, but grieved with a retrospect of all that led up to it; one is pleased with the evidence of the good-will of his fellows—and a better lot of fellows never lived in any profession—but subdued with that soul-shading feeling that youth is fleeting and age approaching. Each man naturally looks forward to the day upon which he may occupy the presidential chair, but when the day comes he would give much to be able to postpone the honor for another ten years. And now it is time for the past-presidents to move up and make room for me; but I do not intend to be placed upon the shelf, if health and strength remain. We all like to mingle with youth, but, unfor-

tunately, youth and age were never meant to mix, as Charles Kingsley has aptly put it —

"When all the world is old, lad,  
And all the trees are brown,  
And all the sport is stale, lad,  
And all the wheels run down,  
Creep home and take your place there  
The spent and maimed among,  
God grant you find a face there  
You loved, when all was young."

It is a satisfaction, in dealing with the awful miseries of life, to know that others suffer, that suffering and death are the accompaniments of life, and from this springs much of the beautiful sympathy that is witnessed by our profession. We have a grand work to do. Charles Dickens has put it in the words of the doctor's wife where she says, "We are not rich in the bank, but we have always prospered, and we have quite enough. I never walk with my husband but I hear the people bless him. I never go into a house of any degree but I hear his praises or see them in grateful eyes. I never lie down at night but I know that in the course of that day he has alleviated pain and soothed some fellow-creature in the time of need. I know that from the beds of those who were past recovery thanks have often gone up in the last hour for his patient ministration. Is not this to be rich?"

The young doctor must have as his main master-faculty, sense, common-sense, and he must have a real turn for the profession. A great divine has said: "The grace of God can do much, but it canna gie a man common-sense." The danger of the present day is that the mind gets too much of too many things. A young medical student may have, as one author puts it, zeal, knowledge, ingenuity, attention, a good eye, a steady hand; he may be an accomplished anatomist, histologist, analyst, and yet with all the lectures and all the books and other helps of his teachers he may be beaten in treating a whitlow or a colic by the nurse in the wards, or the old country doctor, who was present at his birth. The prime qualifications for a doctor have been given by Dr. Brown in the words, Capax, Perspicax, Sagax, Efficax. Capax, room, for the reception and proper arrangement of knowledge; Perspicax, a keen and accurate perception; Sagax, the power of judging, ability to choose and reject; Efficax, the will to do, and a knowledge of the way to do it, the power to use the other three qualities.

The doctor must have a discerning spirit. There is a nick of time, or, in other words, a presence of mind, and this he

must have on, as Dr. Chalmers has said, "Power and promptitude." "Has he wecht, he has promptitude, has he power? He has power, has he promptitude, and, moreover, has he a discerning spirit?" The doctor must be as a general in the field or the pilot in the storm. I often think he belongs to no one in particular, but is a public property. His time is never his own. His children see little of him, and he leads a sort of Bohemian life, restless, active, thoughtful, worried, much beloved and occasionally cordially hated. He should be Bohemian in his tastes if he wishes for refinement to soften his manners and make him less of a wild beast. Art and literature, however, help to make noble only what is already noble, but such hobbies elevate and improve the mind and lift it above the run of every-day life. A good education is a first essential. It is not necessary that everybody should know everything, but it is more to the purpose that every man, when his turn comes, should be able to do some one thing. "The boy who teaches himself natural history by actual bird nesting is healthier and happier, better equipped in body and mind for the battle of life than the nervous, interesting, feverish boy with the big head and thin legs—the wonder of his class." It is well to have a pursuit as well as a study.

The doctor should marry, but his wife should be kept out of his work. Goldsmith said, "I was ever of opinion that the honest man who married and brought up a large family did more service than he who continued single and only talked of population." By marriage a man's sympathies are extended and his views of life are broadened. A touching picture of the refining influence of sorrow has been given us by Dr. Brown, the author of "*Rab and His Friends*," in speaking of his father. He says, "A child, the image of himself, lovely, pensive, and yet ready for any fun, with a keenness of affection that perilled everything on being loved, who must cling to someone and be clasped, made for a garden, not for the rough world, the child of his old age. This peculiar meeting of opposites was very marked. She was stricken with sudden illness. Her mother was gone, and so she was to her father the flower he had the sole keeping of, and his joy in her wild mirth, watching her childish moods of sadness, as if a shadow came over her young heaven, were themselves something to watch. She sunk at once and without much pain, her soul quick and unclouded, and her little forefinger playing to the last with her father's curls, her eyes trying in vain to brighten his. The anguish, the

distress was intense, in its essence permanent. He went mourning and looking for her all his days." But the affection, we learn, softened and refined him, and made him better fitted for his work. His son tells us further that "his affectionate ways with his students were often very curious. He contrived to get at their hearts and find out all their family and local specialties in a sort of shorthand way, and he never forgot them in after life."

And such attentions are valued throughout life, and the clay is moulded and figured and ornamented and enriched and burned in the fire, and fitted for the battle of life. And the defective articles must be rejected and the broken articles may, perhaps, be mended, but they are never the same again, and, perhaps, we would be better without them. Our ranks must be kept clean. We must have a good, healthy professional growth, and in Ontario I am glad to say that such exists. The regular who adopts the methods of a quack is a much more dangerous individual than the quack himself. But we have others who are by no means quacks, who unfortunately lack discernment, and who do not mean to do the harm that they certainly occasion. Our duty is to relieve, and not to cause, suffering. Some surgical procedures of the present day require severe criticism. Surgeons may be too conservative or not conservative enough. A few years ago we had an epidemic of the former, and now we are suffering from a plague of the latter. We are able to do so much that we are apt to do more than we should. I hope that the few dangerous individuals will soon be quarantined, so that the death rate and the cripple rate may diminish and the epidemic be checked. The epidemic has been spreading and has assumed large proportions, and seems to affect chiefly young and middle-aged nervous women. Men with exposed organs appear to be fairly free from its ravages.

But, as a profession in general, we have been making great strides. The state is being saved from the enormous losses incident to great epidemics, and the medical profession is out of pocket as a consequence. It does not appear that proper efforts have been made to reimburse the doctors. We are asked to do what our friends, the lawyers, would take good care not to do without a proper arrangement for the payment of a proper fee. We are asked to register births, to register deaths, to notify regarding infectious diseases, and to attend the poor without remuneration. These are not charities. We are assisting and defending the commonwealth, and the commonwealth should pay us, and we should organize and agitate with this end

in view. Unless such matters are attended to and a new method of payment of members of the profession is adopted, the numbers entering must be considerably reduced. In China the doctor is paid for keeping the family in good health. In Canada we, as a profession, protect the people from dangerous diseases, but the services are not paid for, and are scarcely recognized. A few officials take all the fees. Our real charity is not among the really needy, but among the apparently well-to-do. A proper revision of the relations of medical and surgical fees to one another is much needed, and a ruling of the Association on the ethics of commissions is required. A special committee of this Association should be appointed to investigate these matters and submit a report at our next meeting. It has been said that knowledge is no barren, cold essence, but it is alive with the colors of the earth and sky, and is radiant with light and stars. If we endeavor to follow along the lines of experimental investigation of natural phenomena, we must obtain a fondness for the impartiality and truth which such a study incites. Says Draper, "We will thus dedicate our days to the good of the human race, so that in the fading light of life's evening we may not, on looking back, be forced to acknowledge how insignificant and useless are the objects that we have pursued."

A paragraph that has greatly interested me by way of a retrospect, is the following: "In olden times, the surface of the continent of Europe was, for the most part, covered with pathless forests; here and there it was dotted with monasteries and towns. There were low-lying districts, sometimes hundreds of miles in extent, that spread agues far and wide. In Paris and in London, the two largest cities, the houses were built of wood and daubed with clay, and the roofs were thatched with straw or reeds. There were no windows, and very few had wooden floors until after the introduction of the saw-mill, and such a thing as a carpet was unknown. A little straw scattered here and there in the room was the covering used for the floor. As there were no chimneys, the smoke of the ill-fed, cheerless fire escaped, Indian wigwam-wise, through a hole in the roof. It is needless to say that in such habitations there was but little protection from the weather. No attempt was made at drainage, and the putrefying garbage and rubbish were thrown out of the doors. Men, women and children slept in the same apartment, and, not infrequently, with domestic animals as companions; and, as a consequence, neither modesty nor morality could be maintained. The bed was usually a bag of straw, and

a wooden log for a pillow. Personal cleanliness was unknown, and great officers of the state, even dignitaries so high as the Archbishop of Canterbury, swarmed with vermin. Perfumes were largely used to conceal personal impurity. Many of the citizens clothed themselves in leather, a garment that, with its ever-accumulating impurity, lasted for many years. If a man could procure fresh meat once a week for his dinner, he was considered to be in easy circumstances. Not only was there no house drainage, but there was no street sewerage. There were no pavements or street lamps. After nightfall, the shutters were thrown open, and the slops were unceremoniously emptied down, to the discomfiture of the wayfarer, tracking his path through the narrow streets, with his lantern in his hand." What a picture for us to criticize in the present day! And yet we scarcely realize all the hard work, ignorance, bigotry, persecution and glorious self-denial that have given us what we have to-day in our Western civilization.

Much progress has been due to the work of societies, such as that grand old society, the Royal Society of London. As university men and as educationalists, knowing as we do that our present day conditions are due to the dissemination of knowledge, we should organize and promote similar societies, and see to it that they hold as prominent a place in the community as the churches. It was by the Royal Society that Harvey's discovery of the circulation of the blood was first accepted. The same society gave so much encouragement to vaccination that Queen Caroline submitted her own children to the operation. All scientific observers are satisfied that Queen Caroline was right and the Royal Society was right. Then it was demonstrated that scurvy, the curse of long sea voyages, could be cured by the use of vegetable substances. We follow along and find jails and buildings ventilated and illuminated with gas. Cities were lit up, and made much more habitable. If we expect to have progress, we must rally around our educational institutions, and see to it that they are well provided with the means required to carry on efficiently and well the work of scientific investigation, and that they are untrammelled by the views of either church or state, remembering always, that the slogan of the twentieth century is "Knowledge is power." If this is done, man cannot lapse again into the dark days of the dismal centuries, when pestilences were looked upon as the visitation of God and not as we know them to be, the consequences of filth and wretchedness, easily pre-

vented by personal and municipal cleanliness. In the twelfth century it was found necessary to pave the streets of Paris, as the stench from them was unbearable. Dysenteries and spotted fever, that had been prevalent, diminished, and a sanitary condition was soon established, that approached to that of the Moorish cities of Spain, that had been paved for centuries. But alas for backsliding! Many of the Spanish cities have been allowed to lapse into an unsanitary condition, and the evidences of Spanish sanitation, as I saw it in Cuba, were not calculated to excite enthusiasm. Under the control of Western civilization and the proper application of knowledge, matters have been changed. When it was decided that plagues were not a visitation of God, quarantine was established. Nothing has protected the human race to a greater extent than the establishment of proper quarantine.

When anesthetics were first introduced, their use in labor was discouraged, as it was believed that women should not escape the curse pronounced against them in Genesis. Now anesthetics are, I hope, very universally used, to prevent the awful agonies of labor, by an enlightened, educated, scientific and humane profession. The very best evidence that can be brought forward to emphasize the benefits to mankind of improved methods of living has been obtained from the British Government reports of life insurance transactions, carried out in the seventeenth, and again, a hundred years later, in the eighteenth century. In 1693, the British Government borrowed money by selling annuities on lives from infancy upward, on the basis of the average longevity. The contract was profitable. Ninety-seven years later, another tontine of scale of annuities on the basis of the same expectation of life as in the previous century, was issued. These latter annuitants, however, lived so much longer than their predecessors that it proved to be a very costly loan for the Government. It was found that while 10,000 of each sex in the first tontine died under the age of 28, only 5,772 males and 6,416 females in the second tontine died at the same age, one hundred years later, or, in other words, 20,000 died in the first period and only 12,188 in the second period of one hundred years later, all conditions being identical except the improvements wrought by advanced sanitation.

Once fairly introduced, discovery and invention have unceasingly advanced at an accelerated pace. Each continually reacted on the other, continually they sapped supernaturalism. The diffusion of knowledge by the newspapers and reviews

has immensely increased the power of the press. Where ignorance reigns, crime is prevalent. In such cities as Naples, where the education laws, such as we have in Ontario, either do not exist or are not enforced, the streets are filled with street arabs, who are a nuisance and a menace to society, growing up in squalor, ignorance and filth. In our Western civilization such a condition of affairs cannot exist, and I trust never will exist. The intellectual enlightenment, surrounding scientific activity, has imparted innumerable and invaluable blessings to the human race. Science is not confined to any one nation, but is cosmopolitan. We are living in an age of electric progress. The marvels of electric force have been studied and utilized for the great benefit of mankind. To-day the mummified remains of an Egyptian king, Amenophis, who lived thousands of years ago, are viewed in the original tomb, with the aid of the rays of the electric light. The telegraph and telephone are to be found in the very heart of Darkest Africa. The discovery of the achromatic microscope has rendered us great assistance in studying the nature of disease, and the X-ray has enabled us to pierce what was before impenetrable gloom. The harvest is ready, but not riper than it has been for centuries, but there are more enlightened and better educated and better equipped workers in the field. There is very much to be done and we must be constantly up and doing. I say this particularly to the young and enthusiastic. The foundation of our knowledge as modern doctors is science, and the superstructure must be built upon scientific lines. Hospitals are needed, not such as those that were first established, but modern, properly equipped and up-to-date institutions, with modern, up-to-date methods.

Many hospitals have been erected through the munificence of individuals in the towns, throughout our country. Every town of any size should have its hospital. Such institutions are not intended to do the work of the larger ones in sixteen larger centres; but there is a certain amount of work that can never reach the larger centres that can be done very satisfactorily in small hospitals properly equipped and served by a properly educated profession. Assistance from the larger fields of observation can be obtained when required, and under improved conditions such aid will be of greater service. The almost universal use of the electric light aids our work very materially.

Our prisons have been improved. Our younger criminals have been cared for. Our insane have been kept off the streets. Our poor are being looked after, and now health and comfort

go hand in hand. The true function of our study and deliberation is to prevent rather than to cure disease, and we are fulfilling our functions. But yet death reigns everywhere and at all times and in all places, and we know it. But he is not the stalking giant that he was. He has been marvellously reduced in stature.

Our medical press requires considerable regeneration. The articles published are not censored as rigidly as they should be. Much that is written and published is incomplete, speculative and inaccurate, and hence misleading. Our journals should be purely scientific publications, and not the hot-beds for the propagation of unstable theories. Looking back is not always a pleasant pastime, but there is a definite certainty about it that does not belong to the future. All that has been printed is liable at any time to be reviewed.

And now, in closing, let me say that in the year that has passed a much-desired amalgamation has been effected between two of our greatest educational institutions, Trinity and Toronto University. At first the task looked like a hopeless one, but owing to the good feeling existing between the rival faculties, it was finally achieved. Our province stands high in the banking world, in the musical world, and in the educational world. I was gratified to hear our provincial University so well spoken of in the Mother Land and even in Egypt. The Medical Faculty of the University of Toronto, as now constituted, with its ever increasing facilities, stands second to none, in Canada, at least, and the work accomplished, as evidenced by the standing obtained by our students abroad, is of a very high order.

Fathered by this Association is an institution intended to be a guardian and repository of our archives. We must be prepared to preserve our records for the use and assistance of those who come after us. A calamity befell the world when the Alexandrian library was burned, and a calamity would befall the profession of this province if the books, collected under the name of the Ontario Medical Library, should meet with a similar fate. We are about to occupy new premises, but we need more money to carry on the good work. This is not a municipal matter, but a provincial and professional need, and I hope that many of the out-of-town members of this Association will assist us. Such an institution, to do the work well, must be liberally endowed.

Three trustees have been appointed, and through the generosity of the members of the profession of Toronto, of our good

friend, Prof. Wm. Osler, of Mr. Geo. Gooderham, of Mr. E. B. Osler, Mr. Timothy Eaton, and the executors of the estate of the late H. A. Massey, ten thousand dollars are already in sight.

I desire to thank this Association for the great honor it has conferred upon me, and to thank those who have organized and arranged this meeting.

I feel sure that the hope and desire of every member of this vigorous twenty-four-year-old Association is that it may long be spared to write, to teach, and to guide the medical profession of this our great province.

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## NEWER METHODS OF DIAGNOSIS OF KIDNEY CASES AS APPLIED TO RENAL SURGERY.\*

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I appreciate the honor conferred on me in being allowed to present a paper before this representative medical society of my native province. Whilst there is practically nothing original in this essay, your attention is called to some of the newer methods in diagnosis of kidney diseases which have been introduced since 1885, and which aid us in telling whether it is safe to operate or not on a diseased kidney.

Cystoscopy, or inspection of the interior of the bladder, is performed by two kinds of instruments: one perfected by Nitze, Casper, and Leiter, containing a lens system, and using water in the bladder, and the other variety by Howard Kelly and others, in which the bladder is filled with air. It is possible to tell, whether there is any inflammation or ulceration of the bladder mucosa, and also the number, position and appearance of the ureteral openings. Sometimes there is only one kidney and one ureteral orifice. The urine is seen to spurt from the ureteral openings, and this spurt may appear clear, cloudy, bloody or purulent. Much information may be gained about the activity of the kidneys by watching the contractions of the

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ureteral ends, the spouting of the urine and the intervals between them.

Halban observed tears in the ureteral opening after a ureteral stone had passed.

In tuberculosis of the kidney, the cystoscope often shows a tubercular process around the mouth of the ureter. If blood is seen to escape from one of the ureters, that will assist in making a diagnosis between vesical and renal hemorrhage.

Methylene-blue tinges the urine green, which can be recognized in the case of a normal kidney in fifteen to thirty minutes after taking the drug by the mouth. If we have to wait sixty minutes or longer before one ureter emits tinged urine, then we know there is disease on that side.—Ackard and Castaigne, 1897.

Voelcher and Joseph inject 16 centigrammes of indigo-carmine into the gluteal muscles, and in normal cases the urine is tinged purple in fifteen to thirty minutes. They state that this drug is excreted entirely by the kidneys and is harmless.

In his latest report (1904), Hofmeyer agrees with their views, and the advantages of chromo-cystoscopy are stated as follows:

1. Intensity of the color is seen to vary.
2. The ureteral whirl may be seen going down towards the base of bladder or upwards, indicating a difference in the specific gravity.
3. The opening of ureter may be covered with ulcerations and the only way to find the orifice is to watch for the colored spurt coming out.

The same authors give iodide of potassium by the mouth and fill the bladder with a weak solution of peroxide of hydrogen containing starch. The urinary spurt becomes bluish as soon as potassium iodide begins to be excreted. These tests aid us in determining whether the kidneys are functioning properly or not.

It is evident, however, that if the urine can be obtained separately from each kidney, without being contaminated by pathological elements coming from the ureters, bladder or urethra, diagnosis will be less difficult. There are two methods of accomplishing this, viz., ureteral catheterization and segregation. It is unnecessary at this time to discuss the instruments used for catheterization of ureters, their mode of sterilization, application, etc. Some prefer water dilation of the bladder, and others the air dilation. From my brief experience in the work,

I prefer the water dilation, and the use of a Brenner, or a somewhat similar cystoscope with a lens system, permitting exact and direct images. No matter what instrument is used, all of us will fail at times to catheterize the ureters. Ureteral catheterization is becoming more popular, but at the same time requires much skill and patience. Very few, if any, authentic cases of infection of the ureters follow catheterization. The catheters may become plugged with blood, etc., preventing the collection of urine. Ureteral catheters spoil readily, making the method expensive.

Segregation has for its object the collecting of the urine from each kidney separately, without the use of ureteral catheterization. The principle of the segregator perfected by Neumann, Harris and Down is to raise the centre of the posterior wall of the bladder up, with the aid of an elevator in the rectum or vagina, and then draw off the urine with catheters, separately, from the divided parts.

Luys and Cathelin have designed an intravesical segregator, which divides the bladder into two halves by the use of a thin rubber membrane stretched over a spiral spring. Keen has used this kind with success.

Harris says: "After quite an extensive experience with the segregator, I can state that its intelligent use in suitable cases furnishes results which are reliable and gratifying. It should be used in connection with the cystoscope."

Segregation does not supplant entirely catheterization of the ureters, as there are cases in which the latter is more suitable, but that it does have a very useful field is certain. As many of the diseases of the kidneys require surgical operations for their cure, or even that one of the organs be sacrificed entirely, the necessity in the latter case of being able to estimate the functional capacity of the remaining organ became at once apparent, for upon this point depends the life or death of the patient.

Before the days of ureteral catheterization and the segregator, the determination of this point was practically beyond our power, unless we opened the peritoneum for digital examination of both kidneys; but now by an examination of the separate urines we are able to determine the amount of work done by each organ with almost mathematical precision. In order to do this it is necessary to take into consideration, when examining the urines, the time occupied in their collection, the amount collected from each side, the body weight of the patient, the diet and the amount of solids, such as urea, chlorides, etc. Some of the objections to segregation are:

1. There may be ulceration of bladder and urine is contaminated.

2. Segregators cannot be used when the bladder is much contracted, when bladder tumors of any size exist, or when the prostate is much enlarged.

3. The segregator cannot be left in much over an hour.

4. The ureteral openings are usually close to the median-line. Kummell tells of a case where the right kidney had been removed, and yet with Luys' segregator, the urine escaped from the right side.

Albarren, lately made a number of comparative examinations on the kidneys of dogs, and found the left kidney 15 to 20 grammes heavier than the right. He says that the longer the urine was collected from each kidney, the less the difference, and from a study of the anatomy, physiology and pathology of the kidneys, they are organs of the same kind, but not symmetrical.

Nicolict reports a novel method, which he has employed with success in three suitable cases. The patient rests for a few hours and the bladder is emptied. He uses abdominal massage over one kidney, collects the urine and bladder is washed; then the other kidney is massaged and urine collected.

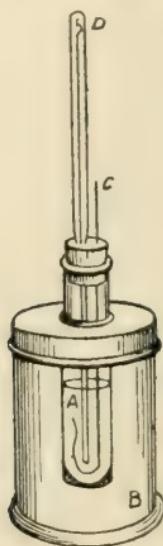
Collecting the urine separately from each kidney is certainly the greatest achievement introduced into this field of work. For example, in tuberculosis of the kidney, if a nephrectomy is to be done, which kidney is tubercular and what is the condition of the other? These questions may be decided by examining the urine obtained separately from each kidney by the use of the ureteral catheters. If a tubercular process be visible around the ureteral opening, then it is unnecessary to catheterize that ureter, as it, no doubt, leads to a tubercular kidney. Catheterization of the opposite and apparently healthy kidney is, however, indicated and the urine so obtained, examined chemically, bacteriologically, and microscopically. These "old" methods of examining the urine should not be discarded, but used in every case.

Cryoscopy (*cryos*, frost) was suggested by De Coppet, in 1871. He pointed out the interesting fact that when a molecule or a definite part by weight of any substance is dissolved in a definite quantity of distilled water, the freezing point of the solution is always lowered to a definite degree; or in other words, the lower the freezing point of a solution the greater the concentration.

Raoult developed this idea in 1882, when he published the

first systematic work on the subject of cryoscopy. This was not made use of in medicine until 1898, when Koryani, of Budapest, saw the value of this method in diseases of the kidney.

Cryoscopy of the urine has no value, except as compared with the blood. By the examination of a great number of normal cases, the urine has been found to freeze at from .9 deg. to 1.8 deg. C., and when the molecular concentration diminishes sufficiently to cause a freezing point above .9 deg. it is an indication of renal insufficiency. When renal insufficiency exists, waste products are retained in the blood and its freezing point is lowered. The normal freezing point of blood varies slightly



between 0.57 deg. and 0.55 deg., the normal being taken as 0.56 deg.—*Dreser*.

Barth says: "The freezing point of the urine from the diseased kidney is less than that from the sound or partially diseased, and the greater the difference (one side being near normal), the greater the pathological process on the diseased side."

The apparatus used for the determination of the freezing point is that of Beckmann:

It consists of an outer jar (*B*), in which the freezing mixture of ice and salt is placed. Suspended in the jar is the tube (*A*), and projecting into this is a wire stirring rod (*C*), and a thermometer (*D*). This thermometer is graduated in one-

hundredths of a degree centigrade, usually from one degree above to four degrees below zero. The scale is sufficiently coarse to allow of the reading of 1-200 of a degree.

Heidenhain's modification differs only in having an extra tube around the tube A, thus providing an air-space between the liquid to be tested and the freezing mixture, so that the cooling will be more gradual. There is also a somewhat simpler apparatus in which the freezing is done with carbon dioxide gas. Before using the thermometer it must be tested by taking the freezing point of distilled water, and any variation from the zero point noted, subsequent reading being corrected by this difference.

The ice and the salt, in large pieces, are placed in the jar in alternate layers, and from 10 to 20 cubic centimeters of the fluid to be tested poured into the inner tube. While the solution is cooling it is constantly stirred by means of the rod, to insure a thorough mixing and a uniform temperature throughout. The mercury at first sinks below the freezing point, but as congelation takes place it again rises and the freezing point read.

In testing the urine, Claude uses a portion of the mixed twenty-four hour amount; while others use a fresh specimen from each kidney. Blood for the test may be withdrawn from one of the large veins in the arm, by means of an aspirator, about 10 c.c. being required to determine the freezing point.

Lindermann finds that there is no deviation from the normal freezing points so long as the suppurative process is limited to the bladder and pelvis of the kidney, but as soon as the parenchyma of the kidney is involved, there is a deviation at once, *i.e.*, the freezing point of the urine is higher than normal, and approaches that of distilled water. There is also a change in the freezing point of the blood if the kidneys are affected to a pronounced degree, and the blood will freeze lower than normal, *i.e.*, below 0.56 deg. C.

Moritz's investigations are also valuable, as he was able to study the pathological conditions of the kidneys after death in all of his cases. He had studied the freezing points of the urine and blood for weeks before the patients died. Claude et Balthazard, Casper and Richter, and others have reached conclusions practically identical.

Kummel and his assistant, Rumpel, are very enthusiastic in advocating the use of cryoscopy in renal surgery. Kummel reports a series of 245 cases, which includes nearly every pathological condition of the kidney in which surgical interference

could be considered. It includes cases of renal stone, tuberculosis, perinephritic abscesses, hydronephrosis, and pyonephrosis, movable kidneys and tumor of many kinds. He gives his experience in his latest publication (1903), and states that his faith in cryoscopy as a means of diagnosis remains unshaken. In over 500 determinations of blood and urine, cryoscopy has not disappointed him once, and it is of the greatest value, when used in relation to surgical diseases of the kidneys.

Kummel claims that the differences in the results obtained by recent writers are due to errors in technique. He does not rely alone upon cryoscopic examination in any case, but employs it in connection with the usual methods as a supplementary test.

Before the introduction of cryoscopy of the blood and urine and ureteral catheterization, the surgeon was in constant fear after every nephrectomy until the danger period has passed, lest the other kidney be unable to carry on the function of elimination properly, or become incompetent as a result of the operation. At that time the mortality was 16 per cent. or more. Since using the newer methods of diagnosis, Kummel has not lost a single case in seventy-two operations, where the evidence showed that he was on the safe side.

Tieken, who has made over 500 estimations of the freezing point, says that when we have exhausted all the usual methods of examination and are still in doubt, we should make a careful cryoscopic examination of the blood, and of a specimen of urine obtained from each kidney, separately, by ureteral catheterization, or by the use of some good segregator, and then be governed accordingly as the result may indicate. He usually advises against operative interference in a kidney lesion when the freezing point of the blood showed a concentration far beyond the danger point.

I hope to report, at a future time, on a series of cases where cryoscopy has been used.

*Phloridzin Test.*—Another aid in determining the functional activity of the kidneys is the comparative estimation of the amount of sugar eliminated by each, during a given time following the administration of .005 phloridzin hypodermically. In fifteen minutes, if the kidney is functioning normally, a temporary glycosuria occurs. The test for sugar may be made with the catheters inserted. This glycosuria does not occur so quickly, nor in such large amounts, in a diseased kidney, nor in one which is not functioning properly.

Another method for the estimation of the sufficiency or in-

sufficiency of the kidneys has been brought into experimental use. It is the electric conductivity of the urine, and can be carried out readily and with small quantities of urine. It gives comparative figures with cryoscopy and depends also on the inorganic molecular concentration of the urine.

Englemann, after making a series of experiments in Kummel's laboratory, reported last month as follows:

1. The freezing point of blood in healthy persons varies within certain limits, i. e., from 0.55 deg. to 0.58 deg., and the concentration of the urine, in health, is subject to daily changes.
2. Increase of the concentration of the blood over normal is a sign of beginning insufficiency of the kidneys and means disease of both kidneys, unless some severe disease, as advanced cancer, be present elsewhere, causing disturbances of the circulation. Other diseases, as a rule, and unilateral affections of the kidney do not change the freezing point of the blood. Large tumors in the abdomen do not change the freezing point of the blood.
3. The electrical conductivity of the blood serum is not changed by insufficiency of the kidneys. Always in acute uremia, and generally in chronic uremia, the freezing point of the blood is considerably increased, but the values for electrical conductivity do not go above normal. After intravenous infusions of normal saline solution, the osmotic pressure of the blood returns in a few minutes to its original condition.
4. In the beginning of a disease of one kidney, even when other clinical symptoms are absent, differences in concentration of the separated urines can be found. Also the electrical conductivity shows the same differences as the cryoscopic values.

The X-rays have been of service in this work during the past three years. McArthur, Leonard and Bevan were the first in America to demonstrate skiagraphs of kidney stones, which were later verified by operations. A skiograph negative as to stone does not prove the absence of a stone, yet a positive skiograph, which shows one or more stones, is invaluable to the surgeon.

Schmidt reports a case where he injected oil, through a ureteral catheter, into the pelvis of the kidney, and a stone escaped afterwards.

Kolischer and Schmidt have adopted a unique method, which consists in the passage of a lead bougie into the ureter as far as possible, and then while in place a skiograph is taken. By this method, the course of the ureters can be determined, the location of the renal pelvis, whether dilated or not, and the exact

topography of renal calculi can be determined. It aids in differentiating gall stones from renal stones.

Kelly has designed wax-tipped bougies in order to locate ureteral stones, which produce markings or scratchings on the wax.

I believe that these newer methods are beginning to, and should, to a great extent, take the place of exploratory operations on the kidney, so that now the surgeon may be almost positive of his diagnosis before operating. If this resume shall be the means of arousing the interest of some of the members of this society in these methods, I will be amply repaid for the time spent in preparing it. My thanks are due to Max Ballin for assistance in translating.

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A curious and interesting note (The Annual Report of the Chief Inspector of Factories and Workshops, England, for the year 1902) is given on the decline of a very old industry, the manufacture of clay pipes. The increased use or abuse of cigarettes is, of course, one obvious cause of this, but another is mentioned, which would hardly have been suspected. It is said that the working of the Act prohibiting the sale of alcoholic drinks to children has a great effect in the same direction. The youngsters whose former duty it was to fetch the evening beer were accustomed to beg for a pipe, and under the new law it is much to be feared that the instructive and pretty practice of blowing bubbles will become a lost art.—*The Lancet*.

## Reports of Societies

### THE ONTARIO MEDICAL ASSOCIATION CONVENTION.

In the new Medical Building of the University of Toronto, the Ontario Medical Association celebrated its twenty-fourth anniversary on the 14th, 15th and 16th of June. The spacious and comfortable lecture-room was tastefully decorated with palms and flowers, and, as President J. F. W. Ross remarked, it gave one a comfortable feeling to hold a meeting in such pleasant surroundings. There was a goodly sprinkling of members present when the president called the meeting to order, and these increased from time to time until upwards of two hundred were assembled. The secretary, Dr. C. P. Lusk, had all matters of business and all papers carefully arranged, and everything went along rapidly and smoothly. The papers read were of a superior order, and subjects of general interest. Under the skilful direction of the chairman the discussions were prompt, brief and pointed. "Altogether," said Dr. Ross, as he was vacating the chair for his successor, Dr. Burt, "we have certainly had the most excellent meeting in the history of the Association."

Dr. C. J. Hastings (Toronto) gave a paper on "Myomatous Degeneration of the Villi of the Chorion." The various theories advanced by the earliest writers to explain this condition were briefly considered. Early in the sixth century Amidi taught that each vesicle contained a living embryo. Later the echinococcus was blamed for the condition. Velpeau first showed the cysts to be distended villi.

Among the causes given for this condition are diseases of the blood vessels, disease of the lymphatics, and degeneration of the mucus in the villi. The whole chorion is usually diseased; sometimes the placenta alone is involved. Marshand demonstrated that it was the epithelial covering of the villi, more than the stroma, that was affected, and that both the syncytium and Langhan's layers of cells underwent profuse and irregular proliferation. The terminal blood vessels disappeared, the stroma degenerated, and the cells necrosed. (The fluid contents is not mucin, but serum.)

*Etiology.*—The causes are not known. Maternal causation is at present most favored. Syphilis, tuberculosis, and endometritis are mentioned as predisposing causes.

*Symptoms.*—Usually manifest before the tenth week; to the

usual signs of pregnancy there is added a sudden bloody discharge and a disproportionately large uterus, with no evidence of fetal life. Constitutionally, anemia and debility, with pressure symptoms and pain.

*Diagnosis.*—The enlarged uterus, the irregular flowing, with the absence of fetal signs, are suggestive. Exploration may be necessary. Twins and threatened abortion must be differentiated.

*Treatment.*—The indication is to empty the uterus at once, using the finger or the long-handled ovum forceps to remove the neoplasm. Firm contraction must be secured subsequently.

*Morbid Anatomy.*—The vesicles are characteristic; their mode of attachment to the main stem is by a pedicle. The embryo may or may not be found. Dr. Hastings further pointed out the fact that chorion epithelioma is frequently preceded by hydatidiform mole. He presented a series of three cases illustrating the condition.

#### DISCUSSION.

Mr. Cameron called attention to this condition as illustrating an epithelial growth from the fetus to the mother tissue. He cited a case of a woman pregnant of an hydatid one year after the menopause, followed by abortion and a subsequent deciduoma malignum.

Dr. McIlwraith pointed out that secondary infections in deciduoma malignum frequently disappeared after operation.

Dr. John Sheahan (St. Catharines) presented a most carefully prepared paper on "The Treatment of Appendicitis in Pregnancy." The question as to whether or not the surgeon should interfere in these cases was ably discussed. Until quite recently non-interference has been the practice; now, however, in acute infective cases pregnancy must be considered no bar to immediate and radical operation.

*CASE.*—Mrs. B., aged 25, primipara, four months pregnant. No history of previous appendiceal trouble—seized with sudden severe pain in the hepatic region. The following day temperature and pulse normal, frequent desire to urinate, with pain in the bladder and over the liver. Three days later a chill, followed by a temperature of 104, pulse 140, respiration 30, and some vomiting. Pain in hepatic region and tenderness over McBurney's point, with but slight rigidity. Two days later a thickened and inflamed appendix was removed, an uninterrupted recovery following. At the eighth month premature labor was induced for albuminuria, with the birth of a dead child.

A summary of one hundred cases prior to 1899 showed that abortion most frequently followed operation; when pregnancy went to full term the fetal mortality being 50 per cent.

*Etiology.*—The same causative factors as exist in uncomplicated cases, pregnancy itself affecting only those cases where the appendix hangs over the pelvic brim, or where the enlarging uterus separates the adhesions of former attacks, or presses on an appendiceal enterolith.

*Pathology.*—The frequent occurrence of abortion, estimated at 40 per cent., is referred to the intimate vascular connections existing between the appendix and the uterine adnexa. Cases with abscess involving the uterus are most unfortunate, as the uterine contractions aid in extension of the pus.

*Diagnosis.*—The uterine tumor prevents palpation. The muscles are stretched and the intestines are pushed up. The following points are important: 1. A history of constipation. 2. The sudden onset of acute abdominal pain in the right iliac fossa. 3. The localization of the pain over McBurney's point. 4. Vomiting. 5. High temperature and rapid pulse. 6. Rigidity of right rectus. 7. Examination per vagina under an anesthetic is advisable. Conditions such as right tubal pregnancy, acute salpingitis, cholecystitis, gall-stone colic and kidney crises must all be carefully differentiated.

*Prognosis.*—In simple catarrhal forms, good without operation; all cases favorable if operated on early. Abrahams says the prognosis is gloomy. He observed sixteen cases with eight deaths, and an infantile mortality of 86 per cent.

*Treatment.*—An inflamed appendix is a source of extreme danger, and as its removal is attended by few additional dangers to the mother and fetus, Munde's dictum is, "Treat the case early, regardless of pregnancy." W. Meyer, of New York, lays down the following rules: 1. Operate within twelve hours in acute perforating appendicitis. 2. A rapid pulse (116 to 120) is an indication for operation. 3. In case of doubt, operation is better than waiting. 4. A sudden lull for ten or twelve hours is an indication for operation. 5. The recurrence of an old appendicitis during pregnancy also demands surgical interference.

#### DISCUSSION.

Dr. Webster (Toronto) advised operation by the vaginal route in pelvic peritonitis during pregnancy. It entailed less shock to the patient. He reported a case of suppurating appendicitis with pelvic abscess opened by this route with excellent results.

"Occipito-Posterior Presentations" was the subject of a paper by Dr. A. A. Macdonald (Toronto). Since the advent of antiseptics and anesthetics a new era has arrived in obstetrics as in surgery. They are exceedingly useful in correcting faulty presentations. Occipito-posterior presentations occur in one and one-half per cent. of all labor cases. Formerly the single blade forceps were used to cause the head to rotate. Herman, in his "Difficult Labor," gives three directions for the use of forceps in treatment: (a) Pull, (b) Flex, (c) Rotate. The practice I advocate is briefly as follows: If you are called to a case late, but before the membranes have ruptured, wait until the os is dilated, then introduce the hand and rotate one-quarter turn, converting the case into an occipito-anterior. To do this fully anesthetize the patient, sterilize the parts and your hands, insert the whole hand, and grasp the head. The occiput being now anterior, flex the head and hold it in position until the forceps are applied and locked. There is no injury to the child's neck, as the turn is only one-quarter. With the forceps on, delivery is readily effected, and without laceration.

#### DISCUSSION.

Dr. Barrieck (Toronto) said that he endorsed the methods of Dr. Macdonald. In cases where the head is out of proportion to the pelvis, how can we use the forceps? The rotation or quarter turn may be impossible when the pelvis is narrow. My treatment is, where the child is viable, perform version, as it preserves the mother from injury.

Dr. A. F. McKenzie (Bracebridge) noted the importance of the paper, but took issue with Dr. Macdonald's percentage for posterior presentations. In his experience there was about 20 per cent. of such cases, but nature generally rotates them herself. He emphasized the importance of diagnosis; it is not always necessary to insert the hand, external palpation being sufficient, especially if the abdominal walls are thin. In vaginal examinations, if the anterior fontanelle is felt first, the case is generally left occipito-posterior presentation.

Dr. Hastings (Toronto) drew attention to the importance of strict asepsis, and emphasized the usefulness of abdominal palpation as an aid to diagnosis.

Dr. Todd (Toronto) said in his experience the method of introducing the hand and rotating the head was accompanied by a greater mortality to the child.

Dr. Hunter (Parkdale) advised leaving the cases largely

alone and not meddling with them. Nature would nearly always correct the position and effect delivery.

Dr. Temple (Toronto) said that early anterior rotation forward is always the treatment for posterior presentations. He could see no reason for an increased mortality, provided surgical asepsis was maintained.

Dr. McIlwraith (Toronto) said that leaving these cases to nature for a time and then applying the forceps was a cause of increased mortality. He advised early anterior rotation.

Dr. Ross (Toronto) explained, on request of Mr. Cameron, his father's method of treatment in these cases. He passed two fingers in front during a pain and the head rotated itself on them.

Dr. Macdonald (reply) could see no reason for an increase of mortality by introduction of the hand. The following points are essential: 1. Choose your time, *i.e.*, before the membranes rupture, the os being dilated. 2. Fully anesthetize the patient. 3. Cleanse the parturient canal and your hands, rotate the head the quarter turn; rotate the shoulders by external manipulation. 4. Keep the occiput down and in position until the forceps are on and locked. Then make traction in the correct direction.

Dr. H. P. H. Galloway (Toronto) then read his paper.

#### DISCUSSION.

Dr. B. E. McKenzie (Toronto) said the diagnosis of congenital dislocation is usually easy; to exclude infantile paralysis is sometimes a difficulty. The value of X-rays in diagnosis is well illustrated by the excellent photographs presented by Dr. Galloway. Other reasons of failure in reduction are that sometimes the head of the femur is absent or is very small, or that there may be no acetabulum, or a very small one. The anatomical conditions are such as to render failure inevitable. He reported fifteen cases with three cures.

In the discussion on Sir Wm. Hingston's paper, "Thoughts on Cancer," it was moved by Mr. Cameron (Toronto), seconded by Dr. Harrison (Selkirk), that the hearty thanks of this Association be tendered to Sir Wm. Hingston for his most excellent paper. Carried with applause.

Dr. Dickson (Toronto) said that the electrical treatment of epithelioma of the face is accompanied by good cosmetic results. He advocated the establishment of a chair of electrical therapeutics in the University. He referred to the method of electro-metallic treatment with the decomposition of mercury and zinc in the tissue forming an oxychloride of mercury and zinc, as

being especially useful in epithelioma of the tongue and sarcoma. He advised the ray treatment to follow operation on malignant cases, citing examples to show that the secondaries frequently disappeared under the raying.

Dr. W. Oldright (Toronto) gave an account of a case of amputation of the breast, in which he had not removed the glands in the axilla, with a good result. He believed that the glands should not always be removed.

Dr. A. McPhedran (Toronto) discussed the importance of early diagnosis in gastric carcinoma. The patient should be submitted to careful examination, with special attention to the age, pain and discomfort in the epigastrium, its nature and relation to food, etc. Many cases may be relieved if diagnosed sufficiently early.

Dr. John Hunter (Toronto) emphasized the importance of good hygienic and systematic after-treatment in these cases; it helped to prolong their lives.

Sir Wm. Hingston (reply) supported Dr. Dickson's electrical treatment. In operations he aimed to cut wide of the growth, and considered it a great misfortune if, during the course of an operation, he should see the cancer. Never operate for purposes of diagnosis. Take time and exercise patience. The less experienced the man, the sooner he will operate.

Dr. McIlwraith (Toronto) then read his paper on "Placenta Praevia." From a careful consideration of the various methods of treatment, the conclusion was reached that when you decide to interfere in these cases, *i.e.*, when the fetus is dead, or the mother in danger from hemorrhage, the best method of procedure is to do a combined or Braxton-Hicks' version, bringing down a leg and then leaving the delivery to nature. The leg serves to check hemorrhage, whilst, by leaving the case to nature, you avoid post-partum hemorrhage from laceration of the cervix or rupture of the uterus. To perform version, dilatation of the os sufficient to admit of the introduction of two fingers is all that is necessary. When the os is not dilated, plug the cervix with iodoform gauze or a Lysol tampon, and repeat if necessary in from four to six hours. Champetier de Ribes' bag is not satisfactory. For rapid dilatation no instrument is equal to the skilled use of the fingers.

#### DISCUSSION.

Dr. Holmes (Chatham) has tried and discarded most methods. The tampon has given him the best satisfaction in most cases. The patient should be in a hospital or under the constant care of a trained nurse. No patient should be left alone

in the country with the danger of a hemorrhage coming on suddenly. The doctor related an instance in which he had spent a whole week in the country watching one patient. The tampon should be sterile, but in introducing it do not draw the uterus down, as when the tenaculum is taken off the uterus returns to its position, leaving a space between it and the tampon. Use a Sim's speculum, and introduce the cotton tampons one by one until the canal is packed full. The pains will come on rapidly, and the presenting part come down and check the hemorrhage.

Dr. W. J. Wilson (Toronto) would not risk the tampon if the waters have come away.

Dr. John Hunter (Parkdale) said it is important to resuscitate the patient before commencing delivery.

Dr. McIlwraith (reply) expressed his opinion that the tampon kills the child, and is not sufficient in checking severe hemorrhage.

Dr. N. A. Powell (Toronto) gave a very interesting and instructive demonstration of technique of intestinal anastomosis by elastic ligature and other devices. He first traced the history of intestinal anastomosis, making mention of Senn's bone plates, Murphy's button, and McGraw's elastic ligature. "The trend of opinion to-day is to do away with complex devices, the surgeon endeavoring to become more proficient in manipulation." The doctor performed two gastro-jejunal anastomoses, illustrating the method of employing the elastic ligature, and the later improvement by means of the triangular stitch introduced by Drs. R. S. Weir and J. W. D. Maury, of New York.

Dr. Geo. Hodge (London), in an exhaustive paper, reviewed the causes and diagnosis of pain in the upper abdominal zone. Among the causes noted were pleurisy, pneumonia, gastric crises, caries of the dorsal vertebrae, uremia, appendicitis in the early stage; cardiac cases: (a) pericarditis, (b) angina, (c) eneurism; rheumatism, especially in children; subphrenic peritonitis following gastric ulcer, hyperacidity of the stomach, hypersecretion with spasmodic vomiting, gastric ulcer, carcinoma of the stomach, chronic gastritis. In the liver, abscess, carcinoma, Hamot's hypertrophic cirrhosis, cholecystitis, cancer of the gall-bladder, cholelithiasis. Of the spleen, movable spleen, infarct, abscess, spleno-medullary leukemia. In the pancreas, acute pancreatitis, chronic pancreatitis, cystic disease, and cancer. In the intestines, duodenal ulcer, impacted feces in the transverse colon. In the kidney, enteroptosis, nephrolithiasis, abscess, tuberculosis, and malignant disease.

## DISCUSSION.

Dr. H. A. McCallum (London) complimented Dr. Hodge on his masterly paper. He drew attention to the difficulty of diagnosis in cholecystitis, reciting a case with pain over the gall-bladder with rigidity, following typhoid. It proved to be suppurating cholecystitis.

Dr. McPhedran (Toronto) also complimented Dr. Hodge on his excellent treatment of this important subject, in which mistakes in diagnosis are extremely numerous. He drew attention to the fact that many abdominal lesions were accompanied by identical symptoms, the pain in the early stages being practically always referred to the umbilicus. He called especial attention to diaphragmatic pleurisy complicating central pneumonia, and to a tender area just to the right of the eleventh dorsal vertebrae, described by Boas, and occurring invariably in cholecystitis. In faulty conditions of the gastric secretion, especially accompanied by an excess of hydrochloric acid, the pain is extreme and is not relieved by food or the administration of antacids; this class of patients, moreover, are neurasthenics and bear pain badly. The stomach contents varies greatly; it may be scanty, or copious if associated with pyloric spasm.

Dr. Oldright (Toronto) said that the pain of appendicitis and perforation of the intestine was frequently referred to the upper abdominal zone.

Sir Wm. Hingston (Montreal) was pleased to note that Dr. Hodge, in his most exhaustive enumeration of causes, had not forgotten to mention that most important condition, uremia. He instanced a case in which he and a confrère had been puzzled by this condition for some days.

Dr. Holmes (Chatham) gave the history of an interesting case. The patient had been sick for three or four years with pain in the right side, extending from the iliac region to the liver. Paroxysms of severe pain, with acute suppression of urine, followed by a copious discharge of pus in the urine, occurred at various intervals. The diagnosis lay between appendicitis, movable kidney, and suppurating cholecystitis. An exploratory incision over the region of the gall-bladder revealed a tongue-like projection of the liver, which in some mysterious way pressed on a suppurating kidney, and under certain conditions prevented the discharge of pus. He was at a loss to satisfactorily explain the mechanism of this action. The patient was immediately turned on his side, a nephrectomy done, perfect cure following.

Dr. Marlow (Toronto) called attention to small hernial pro-

trusions of fat in the linea alba., sometimes producing severe pain. He had seen two cases.

Dr. Webster (Toronto), said that pain may be due to dislocation of the spleen, with rupture of the gastro-splenic omentum. Tumor of the ovary and herpes zoster were other causes of pain.

Dr. C. B. Shuttleworth (Toronto), in an able paper, gave a complete and critical review of the subject, "Lithotomy versus Litholapaxy." From statistics of all the large hospitals available, the writer concluded:

(a) Litholapaxy is certainly the operation of election in all simple cases of stone in the urinary bladder.

(b) When the stone is too hard or too large to be crushed through the urethra or removed by the lateral method without injury, the suprapubic method should be adopted, or, perhaps better, perineal lithotripsy.

(c) When the stone is encysted or associated with a tumor of the bladder or prostate, choose the suprapubic route and remove both at the same time. The mortality of a large number of cases is about 20 per cent. by the suprapubic method.

(d) Where there is a tight, deep, urethral stricture, especially when fistulae exist, requiring a long operation to overcome, select the suprapubic or median perineal operation.

(e) In ankylosis of one or both hip joints, which interferes with the use of urethral instruments, and excludes all perineal operations, do suprapubic lithotomy.

(f) In the presence of foreign bodies in the bladder, which may form the nucleus of a calculus and resist the lithotrite, perform one of the perineal methods.

(g) Although the litholapaxy applied to children is very successful in the hands of experts, for the present lateral lithotomy is the safer operation for the general surgeon.

(h) Litholapaxy should be carried out, whenever possible, when senile degenerations exist, or when there are morbid changes in the genito-urinary apparatus, and the necessary treatment afforded to the complication either before or after litholapaxy.

#### DISCUSSION.

Dr. Cockburn (Hamilton) said that as a matter of practical importance we do not get a sufficient number of cases to afford the necessary practice to become expert in the operation of litholapaxy. The suprapubic method has undoubtedly a bad record, but is an easy operation to perform, and with no chance

of blank lithotomy. The safest method is perineal litholapaxy, but I consider the method of dilating the prostatic urethra with the finger, as advised by Reginald Harrison, a dangerous procedure. The surgeons should practise the operation on the cadaver.

Dr. Powell (Toronto) drew attention to the importance of litholapaxy as a method of extracting stones from female children. He instanced two cases; one, a girl five years old, from whom he removed a large and a small calculus, weighing 241 grains, by litholapaxy. This was some years ago, and, so far as he knew, was the first instance of the method being employed in female children. At the request of Dr. Bigelow, these cases were published; the first may be found in full in Skene's text-book on the diseases of women. The method has now become the established procedure. "I have never been able to overcome my dread of the suprapubic route, based on the mortality reports of the large hospitals. So far, I have only removed 107 stones by the suprapubic method—it is only fair to say, however, that 106 of these came from one case. On the whole I prefer the lateral section when the case is not suitable for litholapaxy."

Dr. Primrose (Toronto) regretted that he had not heard the whole paper, but considered the suprapubic method quite as difficult as the perineal operation. He told of a case where the surgeon attempted litholapaxy and failed; then anesthetized the patient and attempted the suprapubic method, which was given up after wounding the peritoneum twice; the patient was finally put in the lithotomy position and the stone extracted with the greatest ease by lateral section. He took issue with Dr. Shuttleworth's tables of mortality of the various methods, pointing out that the more difficult cases, those with prostatic complication, were the subjects of suprapubic section. Consequently the mortality compared unfavorably with the simpler cases in which the other methods were employed.

Dr. Ross (Toronto) had recently visited Mr. Freyer in London, and had seen some of his work. Mr. Freyer had become so skilful in litholapaxy that he now practically never cuts for stone.

Dr. Webster (Toronto) wished to know which method would be employed with encysted stone.

Dr. Shuttleworth (*reply*) thanked the gentlemen for the interest taken in the discussion. His statistics had been gathered from a great number of cases in large hospitals, and embodied the results of operations on all cases.

Dr. Perry Goldsmith (Belleville) was then called upon for his paper, "The Treatment of Ophthalmia Neonatorum."

#### DISCUSSION.

Dr. Trow (Toronto) did not consider that Dr. Goldsmith should call his treatment unorthodox; in fact, he considered it quite the orthodox method. He emphasized the importance of the careful treatment of the cornea. Argyrol is a god-send in many cases; a 20 per cent. solution may be dropped into the eye, and, if the child is lying down, will reach all parts of the conjunctival sac. No thickening of the conjunctiva results, as with the old painting method, in which abrasion of the cornea was so dangerous. Cocaine should be used with caution; it hardens the cornea, and causes some proliferation of the epithelium. Bichloride does this also, and should not be used in eye work. Protargol has not the advantage of being painless, as is argyrol.

Dr. Goldsmith (reply)—Theoretically, the bichloride is of no use, as it precipitates with mucus and forms an insoluble albuminate of mercury.

Dr. Parfitt (Gravenhurst) presented an account of the work done by the Free Hospital for Incipient Tuberculosis, recently opened in Muskoka by the National Sanitarium Association. He appealed to the members of the profession for a fuller recognition of the importance and need of this work, pointing out that the hospital was dependent upon the charity of the public, and that the medical profession could do a great deal towards keeping its doors open to the needy poor by their co-operation. He presented statistics of the hospital, showing that excellent results followed the systematic out-door treatment, and closed his most interesting paper with a hearty invitation to the members of the Association to visit the Free Hospital and see for themselves the out-door treatment in active operation.

#### DISCUSSION.

Dr. Elliott (Gravenhurst) joined with Dr. Parfitt in inviting more of the profession to visit the sanatorium. He assured them of a hearty welcome, and was quite convinced that the visit would be of profit to themselves.

Dr. Goldsmith (Belleville) had visited the institutions, and could testify to their excellent work, especially in laryngeal cases. The patients were under the constant supervision of the resident physicians, and received treatment, inhalations, applications, etc.,

once or twice daily, if necessary. He had no hesitation in advising patients to go to the sanatorium.

Dr. Milner (Toronto) said that from his experience in examining for life insurance, he was convinced that the early diagnosis of phthisis, in which stage it was favorable for sanatorium treatment, was often overlooked. He considered it the duty of every family physician to examine carefully at least every six months those of his patients with a phthisical tendency. He should pay special attention to hemic murmurs, and the character of the breath sounds.

Dr. Trow (Toronto) related the experience of a patient, a neurasthenic, phthisical, sallow-faced book-worm, who lived in a tent at Gravenhurst through the summer and through most of the severe winter months, coming back to Toronto robust and healthy.

Dr. Parfitt (reply) regretted to say that laryngeal cases usually do badly unless the patient be in otherwise good health. He was sorry that doctors would continue to send to the sanatorium patients in advanced stages of the disease with only a few more months to live. He would much prefer to have patients sent merely on suspicion, as they were prepared to make most delicate tests by means of tuberculin and the injection of sputum into guinea-pigs.

Dr. Wm. Oldright (Toronto) exhibited specimens of tumors removed, in which the diagnosis had been complicated. He related the history of these cases, and gave a *resume* of the differential diagnosis.

#### DISCUSSION.

Dr. Perfect (Toronto Junction) asked how Dr. Oldright would control vomiting following abdominal section.

Dr. Oldright said that vomiting after operation is often difficult to control. Washing out the stomach is useful, and a hypodermic of morphia over the epigastrium successful in stubborn cases.

On Wednesday morning a very excellent series of papers dealing with the various phases of life insurance as it more especially interests the doctor, was read by the following gentlemen: Dr. H. R. Frank (Brantford); Dr. F. Le M. Grasett (Toronto, Canada Life); Dr. R. J. Dwyer (Toronto); Dr. Edw. Ryan (Kingston, Canadian Order of Foresters); Dr. H. C. Scalding (Toronto, Canada Life); Dr. B. L. Riordan (Toronto); Mr. Percy C. H. Papps, A. I. A. (Toronto, Actuary, Manufacturers Life).

A vote of thanks was moved by Drs. Harrison and Davison to Mr. Papps for his interesting and instructive paper.

#### DISCUSSION.

**Dr. J. L. Davison** (Toronto, Imperial Life)—While it may be true that adolescence is especially the age of tuberculosis, and old age that of cancer, yet it must be emphatically understood that no period of life is exempt from tuberculosis. Concerning the influence of heredity on cancer, at the present day not much attention is paid to it, the report of the recent German committee of investigation being that cancer is not hereditary. In regard to syphilis, I hold that three years of active treatment, as advised by Jonathan Hutchison, is the only safe method. The patient should not be considered cured until he has remained free from symptoms for a period of ten years, and even then he cannot be certain of complete safety. Examining physicians should be more careful of their reports, and should not hesitate to write confidential letters to the medical director explaining obscure points. As to the examination of the blood vessels, any degree of sclerosis, or visible pulsation in the radials, is of great importance, often of more importance than the existence of a heart murmur.

**Dr. Machell** (Toronto, Crown Life) suggested that owing to the excellence of the papers and their importance to practitioners in general, they should be published in book form and distributed to members of the Association.

**Dr. Ferguson** (Toronto, Excelsior Life) held in regard to syphilis that Sir Wm. Gowers was right. "It damages the vitality of the system, and paves the way for the entrance of other diseases such as tabes, aneurism and paresis." The descendants of long-lived parents are not necessarily good risks. Alcoholism is an evidence of neurosis—50 to 60 per cent. of neurotics having alcoholic tendencies. In reference to tuberculosis, I hold that without the seed there is no crop. The nature of the soil is also important, some soils being much more favorable to the growth of the germ than others. The following points are important: (a) Family history; (b) Personal condition; (c) Past history; (d) Collateral influence of occupation, habits, etc.

**Dr. Hay** (Toronto, People's Life) emphasized the importance of completely exposing the chest. In a recent case, a woman objected to exposing the chest, and upon insisting, he discovered that one breast had been removed for malignant disease, and the other one showed infection also. The woman was even at that

time under the care of a surgeon who proposed to remove the remaining breast.

Dr. Oldright (Toronto) considered that some cases of mitral regurgitation with good compensation were as deserving of acceptance as were many other cases which were shoved through. Moreover, that a man operated on for appendicitis, with a good, clean, well-healed scar, should be accepted without difficulty.

Dr. Freel (Stouffville)—We have heard much good advice from the medical directors, but I would like to speak a word in behalf of the unfortunate examiners. (Applause.) The difficulty of getting correct answers cannot be over-estimated; especially is it almost impossible to get accurate information concerning the habits and history of the applicant.

Dr. Britton (Toronto) considered that the examiner who was on the spot, and frequently personally acquainted with the applicant, was in a much better position to judge of the acceptance of the risk than the medical referee. He considered that the referees should pay more attention to the examiners' answer to that question.

Dr. Hunter (Parkdale) considered that the pay was much too small for the trouble to which the examining physician was oftentimes put. Recently he had made three attempts to examine an applicant, and on the occasion of the third visit the man informed him that "he hadn't time to be examined then, as his wife had some friends in to a card party."

Dr. Webster (Toronto) wanted to know if it was true that some physicians in Toronto were examining applicants for life insurance at twenty-five cents apiece.

Dr. Scadding (Toronto) said it was true that the doctor was not sufficiently paid in some cases, but the applicant paid the doctor's fees, and in many cases these were poor patients who could not afford to pay more. Moreover the fees were cash, with no difficulty in collecting accounts.

Mr. Papps said that if the doctors are not sufficiently paid, it is largely their own fault. There are physicians who are willing to accept the present fee, and so long as the company could get the services of such men, they could not be expected to pay more.

Dr. Sheard (Toronto) read an excellent paper on "The Relative Importance of the Clinical and Bacteriological Evidences in Diphtheria," as follows:

I have not thought it wise to present to you a set paper this evening, but shall submit some ideas with the object of eliciting an expression of opinion from those members of the profession

assembled here. Many physicians imagined that the discovery of the Klebs-Loeffler bacillus and the proof by injection into guinea-pigs and cats of the production of diphtheria, settled the question beyond further discussion. But I make bold to state that the physician who imagines we know all about diphtheria is confronted with difficulties and troubles at every turn. I am fully convinced we cannot depend exclusively on the findings of bacteriological examination in these cases. There are many cases which present no physical signs, but in which the bacilli are undoubtedly present, and the generally accepted opinion that when the Klebs-Loeffler is present we have diphtheria is not always true. Whether the absence of symptoms is due to a personal immunity or not I am not prepared to say.

There are four distinct varieties of the Klebs-Loeffler bacillus: the long forms, the short, the attenuated, and the pseudo-bacilli. They produce soluble toxins, and are sometimes associated in their action with pus organisms—these toxins produce the symptoms which we designate diphtheria.

I have a series of seven cases diagnosed as posterior fibrinous rhinitis, in which not one but a series of bacteriological examinations failed to reveal the presence of the Klebs-Loeffler, but each case was followed by paralysis. We generally admit with paralysis we have diphtheria. The virulence of diphtheria varies much according to the seed, the mortality being sometimes over 90 per cent. I remember a man from Buffalo with diphtheria who stopped at the Brown Hotel; seven new cases developed from exposure, of whom six died. Some time ago a Russian family of nine set out for Toronto; two of them died at sea of diphtheria, two more in Montreal, and two others in Toronto. All this bears out the teaching that diphtheria is due to a particular form of vegetable organism, and as such is subject to the laws which govern the growth of all seed in various soils.

1st. The sequelæ are due entirely to the toxins, the extent of the membrane being of no consequence in this connection. If we have cellulitis, and no adenitis, the condition is most serious, the toxins entering the nerve trunks and destroying their vitality. The sequelæ may be expected at any time from the third week to the third month.

2nd. Many conditions are due to the associated pus organisms, such as the secondary eruptions which are identical with those of septicemia, and in no way dependent upon the Klebs-Loeffler.

Another form of bacterial diphtheria is the post-scarlatinal type, in which during the second week of the fever the patients

have the Klebs-Loeffler, but exhibit no symptoms; they invariably get well and are not infective. I have records of sixteen such cases. Again we have the association of scarlet fever and diphtheria, the diphtheria not following the scarlet fever, but both diseases existing simultaneously in the same patient as the result of two separate exposures—the incubation period of scarlet fever being four days, whilst that of diphtheria is about six days. At the Isolation Hospital we have a separate ward for these mixed cases. Again we have those cases of post-diphtheritic scarlet fever where the scarlet fever follows closely on the heels of the diphtheria, and where, in spite of any form of treatment, we have a mortality of over 80 per cent. And as these cases occur as frequently in private houses as in hospitals, they cannot be accounted for by infection from one hospital patient to another. A frequent experience at the Isolation Hospital is to have whole families sent in, half of whom are suffering from diphtheria, the other half from scarlet fever; showing the correctness of Sydenham's contention that there exists a far greater intimacy between these two diseases than the private physician would care to admit.

I can report several cases in which, after weeks of most energetic treatment, the bacilli could not be gotten rid of, and though such cases were discharged, no new cases have been known to result from them. One patient in the scarlet fever ward developed otitis media, in the discharge from which the Klebs-Loeffler bacilli were found. He was discharged, and no cases resulting have been reported. From these experiences I am convinced that when the bacillus of diphtheria exists in pus it is innocuous and non-virulent.

In conclusion, these questions naturally arise: 1st. Is scarlet fever antidotal to diphtheria? The answer appears to be in the affirmative. 2nd. Does not diphtheria aggravate scarlet fever? The answer again is "Yes." 3rd. Is the difference in the two diseases due to the evolution of a soluble toxin by the Klebs-Loeffler bacillus? Osler once said to me, "If the rash appears, disappears, and reappears, it is in all probability a septic rash." The scarlet fever rash, we know, does not disappear and reappear, but there are many septic cases, such as recurring erysipelatous rashes, all closely connected clinically with diphtheria and scarlet fever.

Dr. McMahon followed Dr. Sheard with a masterly paper upon "The Uncertainties of Diagnosis and the Necessity of Early and Vigorous Treatment of Diphtheria." He emphasized the importance of the early injection of adequate doses of anti-toxin in all suspected cases, even before the results of a bacterio-

logical examination could be obtained. He called attention to the great reduction in the mortality, especially of laryngeal cases, since the introduction and the general use of antitoxin. In his own practice he was pleased to report that since he had adopted the rule of early and efficient treatment with antitoxin, he had not had a single death. From the reports of the Hospital for Sick Children, he was convinced of the effectiveness of immunizing doses of antitoxin, and advised that members of a family in which a case occurred should each receive adequate immunizing injections.

#### DISCUSSION.

Dr. A. R. Gordon (Toronto) strongly verified Dr. McMahon's statements, and expressed himself in favor of the early, abundant, and fearless treatment with antitoxin.

Dr. Allan Baines (Toronto)—I must congratulate Dr. McMahon upon his happy experience with antitoxin. I wish it to be emphatically understood that I am a believer in antitoxin, but I can report no such good results. . . . In one case I injected 4,000 units, followed in four hours by 2,000 units, in four hours more by 2,000 more units; in all 8,000 units in eight hours, but in spite of this the patient died. Pure cases of diphtheria are undoubtedly benefited by antitoxin, but those cases of mixed infection, with the streptococcus and the staphylococcus, are not cured by antitoxin. It is just ten years since this question was thoroughly thrashed out in the Pediatric Society at New York, when this same conclusion was reached.

Dr. W. J. Wilson (Toronto)—My experience is the same as Dr. McMahon's. My practice is to inject antitoxin early, make swabs in all suspicious cases, and make my own cultures, in which case I have a report in eight hours. I believe calomel fumigation and intubation to be valuable adjuncts in the treatment of laryngeal cases, but my rule is, "When in doubt, use antitoxin." A difficulty we encounter is that when the swabs are sent to the Health Office on Saturday evening, no report can be received until the following Tuesday morning.

Dr. John Ferguson (Toronto)—I endorse Dr. McMahon's position. I use antitoxin freely and early, and in young children rather increase the size of the dose than diminish it, as their tender constitutions have little power in producing self-immunity. Concerning the cases of mixed infection, with the staphylococcus or streptococcus present, I maintain that if you control the Klebs-Loeffler bacillus, you materially aid the child in its struggle. I am pleased to report that I have not had one death since using

antitoxin; in all I have had nine intubation cases, three before the period of antitoxin, and all died, and six since the introduction of antitoxin, and all recovered.

Dr. B. Z. Milner (Toronto)—I wish to call Dr. McMahon's attention to the fact that there is diphtheria in the Sick Children's Hospital at the present time, and that recently when I wished to operate on several cases, I was informed that they were in the isolation ward with diphtheria.

Dr. Sheard (Toronto)—I would like to ask Dr. Machell concerning fifteen cases in the Children's Home. Did these all receive immunizing doses?

Dr. Machell (Toronto)—So far as my memory serves me, I believe all did not receive immunizing doses before being ill, and that but one or two cases occurred in those patients where immunizing doses had been given. . . . Diphtheria varies markedly in epidemics. In some epidemics all die, in others all get well.

Dr. F. N. G. Starr (Toronto) pointed out that the cases at the S. C. H., where the present epidemic commenced, were in children from eight to ten years old, and that the ordinary immunizing dose of 500 units for a child of two or three years was not sufficient for these older children.

Dr. John Hunter (Parkdale) expressed the opinion that the mortality was greater with the use of antitoxin than without it.

Dr. Webster (Toronto) has never seen any good result follow the use of antitoxin after the child once has diphtheria. Of four cases in one family, sent to the Isolation Hospital, one only received antitoxin, and she died; the other three received no antitoxin, and all recovered.

Dr. A. A. Macdonald (Toronto) believes in the effect of immunizing doses, but that in most cases the dose is too small. Do the thing early and do it thoroughly. "Is not your experience the same as mine in laryngeal cases? Formerly did not practically all our laryngeal cases die, while is it not now your experience that the child suffering from marked dyspnea after the injection of the antitoxin, soon commences to breathe freely and easily?"

Dr. McMahon (reply) reiterated his former statements, and said that if Dr. Webster had used antitoxin immediately, the little girl would not now be under a small mound on the hillside.

Dr. Sheard (reply) wished to be understood that there were other things in the treatment of diphtheria besides antitoxin, such as cleansing sprays and swabs; and moreover that laryngeal cases will die in spite of antitoxin, not from toxemia, but from laryn-

gismus stridulus. He doubted the immunizing effects of anti-toxin.

On Wednesday afternoon the Association held their annual luncheon. The affair was a most enjoyable one, excellent speeches being given by Premier Ross, Hon. Mr. Harcourt, Dr. Harrison (Selkirk), and Dean Reeve. Immediately after the luncheon, through the kindness of the Automobile Club, the members of the Association were treated to a ride around the city.

"The Treatment of Prostatic Hypertrophy" was the title of a paper by Dr. T. K. Holmes (Chatham).

From a careful consideration of the subject, Dr. Holmes concludes that castration and vasectomy are of little value; that the Bottini operation, while not in general favor, has many good points, and is deserving of a more careful study and a wider employment; that suprapubic prostatectomy is difficult in fat subjects; the perineal method is the one most generally useful. The gland is drawn down into the wound by means of Sims' rubber bag, and carefully enucleated from its capsule. If it is desirable to avoid damage to the ejaculatory ducts, Dr. Young's (Baltimore) device for pulling down the gland and performing the operation visually is recommended. Dr. Holmes gave the history of two successful cases; in one he employed the Bottini operation, in the other median perineal prostatectomy was done. In conclusion he warned the profession against the constant use of the catheter, as it almost invariably resulted in cystitis. "There are one hundred men in this room, and probably twenty of us will have to seek relief for an enlarged prostate. We should advise to others the same treatment that we ourselves would like to receive."

#### DISCUSSION.

Dr. Bruce (Toronto) preferred the suprapubic operation, although he had not acquired the dexterity of Mr. Freyer, who shelled out the prostate in two minutes. He had never met with any special difficulty in reaching the gland in fat patients. Within the last month he had operated on one very stout gentleman, and by pressing the prostate forward from below had experienced no difficulty in removing it.

Dr. Powell (Toronto) had not intended to take part in the discussion, but was drawn into it by the good-natured raillery of one of the speakers. He was pleased to say that, although he dreaded the suprapubic route, he had as yet no mortality in the operation. Statistics from large centres, however, showed the operation to be attended by a mortality of about 20 per cent:

He cited a recent aggravated case, and had just that day received a letter from the patient announcing that "he was able to dispense with his catheter."

President Ross told of a recent visit to Mr. Freyer, in London, and gave short extracts from letters of rejoicing nobility, upon whom Mr. Freyer had operated for enlarged prostate. "Duke — writes, 'Dear Dr., . . . I can now pump ship like a two-year-old.'" "Earl — writes, 'Dear Dr., . . . I tell you I can now make the pot hum.'"

Mr. Cameron (Toronto) was pleased to have heard Dr. Holmes' interesting and able paper. He agreed that the older perineal route was the better method. It was not absolutely necessary to damage the urethra in all cases. He took exception to the expression "the anatomical middle lobe," as there is no middle lobe to the prostate. He regretted to report a serious mortality by the suprapubic method. He did so, however, out of the hope that those present might benefit from his misfortunes. Within the last year and a half he had done fifteen suprapubic sections, with five deaths. Two of the fatalities could not be attributed to the operation, one being from facial erysipelas and bronchitis, the other from hemiplegia; but the other three, who were promising and otherwise healthy patients, died suddenly: one acutely insane in twenty-four hours, who was perfectly well twelve hours after the operation; one unaccountably, without either hemorrhage or shock, in about twenty hours, having been in excellent condition twelve hours after the operation; and the last in about forty-eight hours, of albuminous edema of the lungs, the pulse and temperature having been normal and the general condition excellent twelve, twenty-four, and thirty-six hours after the operation. With the old perineal operation he had had no mortality.

Dr. McKinnon (Guelph) operated wholly by the suprapubic method. He considered it much easier, involving less danger of wounding the rectum, and rarely followed by fistulae. His mortality had not been great. The perineal route is simple, involves less shock to the patient, but is frequently followed by fistulae. He reported a series of cases with successful operation and recovery, in patients from 65 to 83 years old. He had only had two deaths.

Dr. Olmstead (Hamilton) said that all methods are simple to those practised and skilled in the method of their choice. On the continent the perineal method was used almost exclusively and with great success; in England and Canada the suprapubic route was the method of election and enjoyed the same success.

He advocated the more frequent use of the cystoscope. Freyer was able to announce good results, and he was surprised that, with the immense amount of material at his disposal, he did not announce more of them, because he was able to carefully select his cases. We in Canada here could not so pick and choose, but were forced to do our best to relieve all sufferers. In his mind the one objection to the suprapubic method was the poor drainage obtained.

Dr. Holmes (reply) strongly advised more careful study of the Bottini operation. No general anesthetic was required, and he believed it had a great future before it.

Dr. Bingham—The contracted bladder was easily raised by the hand in the rectum. The bladder should be sutured to the abdominal wall before opening.

Dr. J. Campbell Meyers (Deer Park) read a splendid paper on "Neurasthenia in Some of its Relations to Insanity."

#### DISCUSSION.

Dr. McKenzie (Bracebridge) emphasized the importance of the subject, stating that neurasthenics were frequently met with in country practice. These cases fall easy victims to the quacks. It was a matter of great difficulty to carry out isolation in many cases.

Dr. Ferguson (Toronto) said that neurasthenia and the earlier forms of insanity are several links in the same chain; the exact situation of the boundary line is beyond human judgment. Pronounced cases of neurasthenia or insanity are easy of diagnosis, but between these there is a series most puzzling to us all. The question is one of physical disturbance, the great feature being that the slightest mental effort produces exhaustion. Again, the nerve system becomes so depleted of all energy that physical exertion is impossible. The condition is a nutritional change first, followed later by an anatomical one. The dendrites fail to absorb sufficient nutriment from the brain matter, and the slightest possible effort exhausts this limited supply. Disorganization sets in and the sickly, weakly, though normal, cell becomes a morbid and pathological one, and ultimately disappears. The conditions producing these effects are: 1. Prolonged worry; 2. Sudden mental shock; 3. Over-work and no rest; 4. Some toxemia which affects the brain, destroying the nerve cell.

Dr. Hunter (Parkdale) would like to know the position hydrotherapy occupied in Dr. Meyers' treatment. A woman under his care, suffering from a pronounced form of neuras-

thenia, for whom he had prescribed a cold bath every morning (preferably at 5 a.m.), followed by a brisk bicycle ride, was now a perfect picture of ruddy health.

Dr. Bruce Smith emphasized the use of hydrotherapy in treatment, the etiological value of toxemia, and the importance of early recognition of the symptoms in neurasthenia. "Insanity," he concluded, "is the culmination of nervous derangements in the patient, undiscovered and uncorrected."

Dr. Holmes (Chatham) said that women were born with unstable nervous systems, and later in life misfortunes overtake them which lower their vitality and produce the symptoms of neurasthenia. We must search carefully for the cause: it may be a movable kidney, an inflamed gall-bladder, faulty position of the uterus, inflammation of the ovary, laceration of the cervix, or eye-strain. The correction of these conditions, he believed, would, in most cases, result in the entire disappearance of the nervous symptoms. In a case of puerperal insanity recently under his care, he repaired a torn cervix, and the insanity disappeared. Many cases also were due, he believed, to auto-intoxication from the alimentary canal.

Dr. McPhedran (Toronto) said that cases on the borderland between neurasthenia and insanity are difficult of diagnosis. Neurasthenia should include all cases of nerve prostration: e.g., in one patient weakness of digestion may be the prominent feature; another patient cannot sleep or rest; still another may have disturbed cardiac action; but all are neurasthenic. He believed that there should be better provision for more careful attention to the incipient insane. There should be one or more stations for the temporary treatment of such patients, and wherein incurable and curable cases could be separated. This would materially relieve the asylums and save the patient from the stigma attached to the inmate of an insane asylum. There are such institutions in Europe and the United States. An inherited difference in the vitality of tissue is responsible for the easy break-down in neurasthenics. Some have poor vitality of brain, of kidney, or of stomach, with the result that these organs are readily exhausted.

Dr. W. J. Wilson, Toronto, agreed with Dr. Holmes that putting all the organs right and changing the environment of the patient would accomplish many cures. He deprecated the wholesale removal of ovaries for trifling causes, the ultimate result being bad.

President Ross could not agree with Dr. Holmes. Some years ago, through the kindness of Dr. Beemer, of Mimico

Asylum, he operated on a number of women patients, repairing lacerations, correcting uterine displacements, etc., with no change in the mental condition of the patients. They were insane before, and they are insane yet, and will probably remain so.

Dr. Meyers (reply)—Any pathological condition should certainly be treated, but improvement in the mental condition could not be expected to follow. He could see no reason why an operation on a woman's uterus should influence the condition of her mind.

Dr. McPhedran discussed some forms of skin disease.

1. *Impetigo Contagiosa*.—The disease is contagious, most commonly occurring on the face or pubic regions, and due to the streptococcus or staphylococcus (or some believe to a specific organism). The disease tends to recur from time to time.

*Treatment*.—Cleansing, and the application of antiseptic ointments such as ung. hyd. annm. chlor., or, better, resorcin, 20 to 30 grains in an ounce of lanolin. The principle in the treatment of all skin diseases is, cleanse and apply antiseptic, soothing, or stimulating applications.

2. *Erythema Multiforma*.—The trouble commenced in March, four years ago, as a vesicular eruption, occurring on the hands, face, and neck, *i.e.*, the exposed parts only. The eruption lasted all summer, faded in the fall, leaving no mark. It returned in March of the following spring, and went through the same cycle. The lesions are first vesicular, then pustular, and finally coarse crusts, which drop off in a few weeks, leaving faint marks. No inflammation precedes the vesiculation. It is, doubtless, purely a congestion with a serous exudate, followed by an exudate of leucocytes and ultimate crusting.

3. *Acne and eruption on the leg* (syphilitic or tubercular).

*Treatment*.—Acne, difficult in phlegmatic types. Stimulate until slight desquamation and then soothe. He prescribed Resorcin, 20 gr.; B. naphthol  $\frac{1}{2}$  dr.; sulphur, 2 dr.; green soap and vaselin, aa, 1 oz. To soothe the leg ulcer use Unna's paste: zinc oxide 1, gelatine 2, glycerin 3, aqua 4. Add, if necessary, ichthylol, 2, 3, 4, or 5 per cent.

4. *Tinea Tonsurans*.—Difficult to cure, as the microsporon is deep down in the hair follicles. Two principles to be observed, thoroughness and perseverance, *i.e.*, use any parasiticide and keep it up. He prescribed sulphur, 2 dr.; lanolin, 1 oz.; or chrysarobin, 1 dr. to the oz.

5. *Cycosis Non-parasitica*.

6. *Leucoderma* in a man with pernicious anemia.

Dr. H. B. Anderson (Toronto) followed Dr. McPhedran.

1. *Urticaria Pigmentosa*.—Present since birth. Small wheels, leaving yellowish or brownish pigmentation spots; recur at intervals in the same spot, leaving a deeper stain. Pigmentation due to the escape of red blood corpuscles and deposit of their pigment.

2. *Weeping Eczema*.

3. *Psoriasis*.

4. Exhibition of cholene crystals from the blood of a nerve case, prepared by Dr. F. H. Scott, according to the method of Dr. Haliburton.

5. *Molluscum Fibrosom*.—A man with many hundreds of small cutaneous tumors.

Dr. H. B. Anderson then read a paper on "Strain in Heart Disease." The influence of severe bodily exertion in inducing rupture of the heart or blood vessels, in patients with arteriosclerosis, or in those unused to physical exertion, was illustrated by the exhibition of a number of specimens, with a short history of each.

1. A patient dropped dead on the street, following rapid walking. The specimen showed rupture of the aorta. Presented by Dr. Powell.

2. A woman, aged 60, died suddenly during the passage of a stomach tube. Specimen reveals rupture of the left ventricle.

3. Captain on a boat attempted to carry a heavy tie, fell unconscious, suffering from tachycardia. Died nine months later, aged 55. Specimen shows rupture of the sinus of Valsalva, with aneurismal dilatation pressing on the right heart.

4. Patient a moderate drinker, good liver, no history of syphilis. After a week of unusual exertion was seized with a sudden pain and sense of weakness, and died the same night. The autopsy showed a dissecting aneurism involving the whole of the descending aorta down to the bifurcation of the iliacs. The blood had burst the middle and inner coats of the aorta, making a false passage for itself under the adventitia.

Dr. J. H. Elliott (Gravenhurst) gave an illustrated paper on the advantages of a pictorial record of chest examinations. By means of lines, circles, dots and crosses, he represents the degree of dulness, adventitious sounds, the nature of the breath sounds, pleuritic rubs, etc. The method commended itself for ease, simplicity and efficiency to all present. Dr. Elliott very kindly offered to explain the details of the system, with illustrations, etc., to anyone who cared to communicate with him.

Dr. R. N. Fraser (Thamesville) then read his paper, and

reported a remarkable group of cases of malignant disease occurring in members of the same family and attendants who waited on them.

#### DISCUSSION.

Dr. W. J. Wilson (Toronto) recited the case of a gentleman in Germany, who by mistake drank the stomach contents from a patient with gastric carcinoma, and he himself died of cancer some months later. Another case, where a physician by mistake sucked up the stomach contents of a cancer patient from a tube, he himself dying of cancer some fifteen months later, was mentioned.

Dr. Ferguson (Toronto) referred to the excellent record of family cases of malignant disease reported in a recent number of the *British Lancet*.

Dr. Marlow (Toronto) asked if the undescended testicle in No. 5 of Dr. Fraser's series had been found to be cancerous.

Dr. Fraser (reply) did not wish to give the impression that he held cancer to be infectious. It is probably auto-infectious. He could not answer Dr. Marlow's question, as the gland had not been examined.

Dr. A. Primrose (Toronto) then read a paper on "The Surgical Relief of Epilepsy."

Dr. Primrose presented the history of two cases of traumatic epilepsy operated on with good results so far. The first patient was a young lad, about 20, who gave a thrilling history of shipwreck and exposure at sea, after which the fits developed. The seizures always commenced in the first two fingers of the left hand; the wound, however, was on the left side of the head. Was this, then, a case where the pyramidal tracts did not cross, or had there been a lesion on the right side, owing to bursting as a result of the blow on the left side? The left Rolandic area was first trephined, and electrodes applied in the hand area, causing immediate movement of the fingers of the right hand. This proved that the pyramidal tracts did cross. An opening was immediately made on the right side, which revealed a thickened dura mater, and but little other change. Some of this was removed, tension relieved, and the wounds closed up. The patient had two or three fits the night after the operation, but since then (some six months now), has been free from them. The second case was the result of a depressed fracture involving only the inner table of the skull, the result of a pitch-fork wound. The operation revealed an abscess, which was opened and drained. The patient has since been free from seizures.

## DISCUSSION.

Dr. Dickson (Toronto) explained the method of localizing motor centres in the cortex by electrodes from a Faradic current. Experimenting should not be done, as it involves great shock to the patient. Fine platinum electrodes are inserted into the cortex and the current turned on gently.

Mr. Cameron (Toronto) said that a lesion giving rise to cortical irritation should be removed. Epilepsy is a discharge of nervous energy from the motor centre in which the cells go off at halfcock. He believed Case 1 of Professor Primrose was a hystero-epileptic, probably a disciple of Captain Marryat's. There is no use operating unless you find some focal symptom. Personally he had not met with much success in the operation; the patients were better for about a year, but the epilepsy almost invariably returned.

Dr. Ferguson (Toronto) said that statistics show that less than 5 per cent. of epileptics are relieved by surgical procedure. Idiopathic cases, with focal symptoms, and especially Jacksonian epilepsy, are most favorable. Cases operated on almost invariably recur, owing to the contraction of cicatricial tissue, and the last condition is worse than the first. He reported a case of depressed fracture, operated on with complete recovery.

Dr. Bruce (Toronto) reported a case of traumatic epilepsy in which he had removed some of the cortex corresponding to the hand centre. At first there was paresis of the hand, but this recovered, and later on the patient developed epilepsy on the opposite side. "So I transferred him from a right-handed to a left-handed epileptic," said the surgeon.

Dr. McConnell, of Las Cruces, Mexico, read a most instructive and interesting paper on "Climatology and its Influence in the Cure of many Cases of, especially, Chest Trouble."

Dr. Oldright (Toronto) complimented Dr. McConnell on his excellent paper. Was always pleased to meet their former students, and learn of their successes. He asked Dr. McConnell to explain the action of the alfalfa in stopping dust.

Dr. Wishart (Toronto) said that we should congratulate ourselves on the information gained from this paper. It will be of great assistance in directing patients to suitable health resorts. He asked the doctor about the winds and the feeding in the arid zone.

Dr. Hunter (Parkdale) had visited the arid regions and could add his testimony to that of Dr. McConnell. The medical men in those districts were prominent physicians from New York

and other large cities, forced to live in these health resorts. "Do not load your patients down with directions how to live, but place them in the hands of resident medical men." He would like to know about the disinfection of houses and the removal of patients in Pullman cars.

Mr. Cameron highly complimented the writer; the paper was as full of pabulum as an egg, and might be well taken as a model.

Dr. Webster (Toronto) said that many consumptive people have but limited means, and cannot afford to take long journeys and live in expensive resorts. Lots of them are able to get well right here in Toronto.

Dr. McConnell (reply) said that the alfalfa meadows were effective barriers to the dust. Patients did better to provide themselves with tents, and then they ran no risk of infection from houses. One could live comfortably on \$10 a week.

Dr. Burnham (Toronto) then read a paper on "Inflammations of the Lachrymal Apparatus."

Inflammation of the lachrymal sac is the result of struma, violence, or the entrance of irritating fluid, or, most commonly, stricture of the nasal duct. This last condition results in insufficient drainage to the duct, and a chronic bleuorrhea is set up. This mucocele is attended by much suffering and constant disturbance, and demands effective treatment. Initial leeching, calomel, etc., usually fail to abort the attack; hot lime*sepi* poultices and free incision on fluctuation are necessary in the acute stage. To remove the cause, and consequently relieve the condition, Dr. Burnham operates as follows: Having slit the canalculus into the sac, he introduces by means of a syringe a 5 per cent. solution of cocaine, and passes probes Nos. 1 and 2 only. He then irrigates freely with adrenalin, followed by potassium permanganate, 1 in 12,000; and last of all he passes a silver style, which is allowed to remain in position. In three or four days the style is removed, the cocaine, adrenalin, and permanganate irrigation repeated, and the style replaced. This method of treatment is much less painful and much more effective than the old method of passing the largest probe possible and using no medication. During the process of healing, little fibrous bands appear along the floor of the divided canalculus, which act as dams preventing the free exit of the tears, and which must consequently be divided.

#### DISCUSSION.

Dr. Wishart asked Dr. Burnham if the inferior turbinate was not frequently enlarged close to the outlet of the nasal duct, and

if cauterization was not indicated? Would like Dr. Burnham to explain more fully what he meant by the constriction bands in the canaliculus lachrymalis.

Dr. Burnham (reply)—Where the turbinate was enlarged, it should certainly be treated. By the constrictions he meant little cicatricial bands, 6, 8, or 10 in number, which prevented the free passage of the probe into the lachrymal sac, and had to be divided time and time again until no obstruction was offered.

Dr. D. J. Gibb Wishart then read his report of a case of double otitis media, with mastoid involvement. Operation and termination in fatal purulent leptomeningitis.

Dr. Wishart reported a case of mastoid development which presented no symptoms except pus in the middle ear, which seemed to well up through the opening in the drum, and some indefinite headache. The man was under the careful observation of both himself and the family physician, a careful record of temperature having been kept, which showed at no time any marked elevation. The patient did not improve, however; was sent to the General Hospital, the mastoid opened, but fatal leptomeningitis followed. The interesting feature of the case is that at no time did the patient exhibit the usual symptoms of mastoid trouble; at no time was there local pain or tenderness, nor any elevation of temperature nor rigors.

Dr. B. Z. Milner (Toronto) read a paper on "Lympho-sarcoma." The tumor occurred in a young man about nineteen, a strong athletic fellow. It was situated in the neck, and examination showed it to be a round-celled sarcoma. It was removed by operation, but the glands in the neighborhood were found to be involved, and the growth recurred. The patient was treated with X-rays, with no apparent improvement. Coley's fluid was then used, and after a thorough trial was abandoned, no benefit having resulted. Finsen's rays also proved useless. The patient was seen at various times by Dr. Powell (Toronto), and Dr. Coley (New York). It was now about a year since the first appearance of the trouble, and the patient was in bad condition. As a last resort X-rays, combined with quinine-fluorescence (the quinine being given internally before the raying), were tried. Under this the growth made no further progress, and some improvement even was noted. The patient, however, was so exhausted that he succumbed.

"Some of the Newer Methods of Diagnosis in Kidney Cases as Applied to Renal Surgery," was the title of a paper by Dr. W. A. Hackett, Professor of Genito-Urinary Diseases (Detroit).

Dr. Hackett briefly reviewed the more important devices and

methods introduced since 1885, pointing out the use and advantages of each. Chromocystoscopy is a useful method of determining the activity of the kidneys. The patient is given a dose of methyl blue or indigo carmine, which are normally excreted by the kidneys in fifteen to thirty minutes. By watching the urethral openings with a cystoscope, the exact time of the appearance of colored urine from each kidney can be determined. If one is manifestly slower than the other, it is evidently the diseased kidney.

Urethral catheterization and segregation enable us to collect the urine from the individual kidney. The former method, while becoming more and more popular, is expensive, and demands skill and patience on the part of the operator. Segregation is open to the objection that the bladder may be diseased.

The history of cryoscopy, or the determination of the freezing point of urine, and the application of Dr. Coppet's law, that the lower the freezing point the greater the concentration, was considered in some detail. The method combined with segregation has been shown to be a most valuable aid in diagnosis, and has removed the fear of the surgeon after nephrectomy to a large extent.

*Phloridzin Test.*—After the hypodermic injection of phloridzin, a diseased kidney is found to excrete sugar less rapidly than a normal one. . . . Electrical conductivity of urine, X-rays and various bougies were briefly mentioned also. In concluding, the writer explained that these new methods of diagnosis are gradually replacing the old exploratory operation.

Dr. R. D. Rudolf (Toronto) followed next with a paper on "Diagnosis of Functional Heart Murmurs."

Functional murmurs, as first described by Laennec, are soft and blowing in character, occur most commonly in the position of the pulmonary area, opposite the second left costal cartilage, and are in no way connected with valvular diseases. They are due, not to the anemia, as so often taught, but to a condition of hypotonus of the muscles of the circulatory system; that is, there is a relaxation of the sphincter muscles guarding the mitral and tricuspid orifices, and permitting of a leakage. In the pulmonary area, the fibrous band around the orifice permits of no dilatation, but the muscular structure of the pulmonary artery permits it to dilate, and consequently we have a condition in which the blood stream flows from one chamber, that is, the right ventricle, through a relatively constricted orifice, into the dilated pulmonary artery. This is the most favorable arrangement for the pro-

duction of a murmur. Dr. Rudolf laid down the following rules to aid in the diagnosis of functional from organic murmurs:

1. They occur in adolescence and young adults.
2. They are more common in males than females.
3. They all occur during ventricular systole.
4. While the pulmonic area is the most common situation for functional murmurs, it is a rare site for organic murmurs (congenital stenosis being the only one found).
5. Functional murmurs are heard in the neck; e.g., bruit de diable.
6. As the general health improves, functional murmurs tend to disappear; organic murmurs, on the other hand, tend to get louder with increasing strength.
7. Functional murmurs are soft, and accompany rather than displace the first sound.
8. They are not so widely propagated as organic murmurs.
9. They vary under certain conditions; e.g., they are louder after exertion, and are especially increased on lying down.
10. The pulmonic second sound is accentuated early, even before the murmur is heard; this is not so in organic pulmonary stenosis.
11. They are accompanied with little signs of dilatation or displacement of the apex.
12. Cardio-respiratory sounds are sometimes mistaken; ask the patient to hold his breath and they will disappear.
13. Signs of failing compensation are rare in functional cases.
14. The patients are not conscious of the existence of the murmur. An analysis of the patients in the surgical wards of the H. S. C. showed that in 60 per cent. functional murmurs were present. An analysis of a number of wards in the Toronto General Hospital and St. Michael's Hospital showed the existence of functional murmurs in 50 per cent. of the patients.
15. Fever gives rise to functional murmurs. They occur in 66 per cent. of scarlet fever cases, and are apt to recur in rheumatic fever. A useful rule in this connection is, "Functional murmurs tend to occur late in fever (e.g., rheumatic fever), while endocardial murmurs appear within the first ten days."
16. Pressure has not much effect as a rule in altering functional murmurs.

Finally, we are all too apt to conclude that there is organic disease when we hear a murmur, and we are too easily soothed into believing the patient organically sound when no murmur can be discovered.

Dr. Chas. Hodgetts, Secretary, Ontario Board of Health, read a capital paper on "The Diagnosis of Modified Smallpox."

Dr. Hodgetts employs the word "modified" to designate those cases where the course is in any way atypical, not to cases modified by vaccination—the so-called varioloid.

About five years ago the disease appeared in Essex County and Northern Ontario, and was variously diagnosed as chicken-pox, impetigo and syphilis. The spread of the affection and the fact that those unvaccinated were its victims, soon, however, established the nature of the epidemic. Since then the disease has continued from year to year, with the maximum number of cases in January and the minimum during the summer months. The virulence of the contagion has been variable, during the early stages (preceding pustulation), but slightly contagious, and in many mild cases the contagion seems slight throughout. The regulation incubation period of twelve days has been the rule, but many cases of fifteen, sixteen and eighteen days have occurred, necessitating the period of quarantine being extended to eighteen days.

The initial symptoms have varied all the way from a passing malaise to severe headache and backache, accompanied by nausea and vomiting. The initial temperature has been from 100 to 102 F. The mildness or severity of the onset, however, has been no indication of a mild or severe attack. The fever drops with the appearance of the characteristic rash in about seventy-two hours. The rash runs through its regular series of macules, vesicles, pustules and crusts.

The affection is most frequently mistaken for chicken-pox, impetigo and pustular syphilitic, and in the differentiation the following points are important:

*Chicken-pox.*—1. A disease of childhood. 2. Runs a rapid course; lesions are papules, vesicles and scabs, all in twenty-four hours. All over in a week. 3. Premonitory symptoms slight or none. 4. Temperature appears with the rash. 5. Vesicles soft and irregular. 6. Eruption occurs on covered parts. 7. No scar or pigmentation left.

*Impetigo.*—1. No elevation of temperature. 2. No initial stage. 3. Begins as a vesicle or vesicular pustule. 4. Occurs on the face, hands and exposed parts. 5. Unsymmetrical and superficial, large blebs. 6. Crust friable, leaves no scar. 7. Finger-nails carry the infection.

*Pustular Syphiloderm.*—The large indurated base of the vesicle, which lacks umbilication, and the history and persistence of the symptoms should prevent mistake.

"Enlargements of the Prostate Gland" was the title of a paper by Dr. F. W. Marlow (Toronto).

Dr. Marlow gave a very comprehensive account of the anatomy of the prostate, explaining most carefully the position and variations of the anatomical middle lobe.

Prostatic enlargement, he said, does not necessarily mean prostatic obstruction; according to Sir Henry Thompson, while 30 per cent. of men beyond the age of 55 have prostatic enlargement, but 5 per cent. have obstruction. The etiology of the condition is still obscure; two theories most in vogue at the present time are: (a) Prostatic enlargement is a local result of a general arterio-sclerosis (held by Guyon and the French school). This is opposed by Freyer, Casper, Bruce, Clark, etc., who regard arterio-sclerosis as conducive to atrophy and not hypertrophy. (b) On account of similarity in the structure of the prostate and the uterus, Velpeau claims the existence of an analogy between prostatic enlargement and fibromyoma of the uterus.

The enlargement may be uniform or more frequently asymmetrical, the enlarged portion raising the vesicle outlet, stretching the urethral walls and forming a pouch in which residual urine collects. The symptoms of the trouble are increased frequency of micturition, due first to irritation of the growth, but later to diminution of the bladder capacity. There is difficulty in starting the stream, which is small, without its normal projection curve, and followed by dribbling. With proper attention to the history and symptoms, and careful digital examination, the diagnosis should be easy.

Dr. G. A. Bingham (Toronto) read a paper on "Surgical Treatment of Enlargement of the Prostate."

The methods employed will depend entirely upon the individual case. One man with no symptoms but increased micturition may be carefully and scientifically introduced to catheter life. While in another case with overflow, cystitis and probably pyelitis, drainage by median perineal cystotomy, done under a local anesthesia, is demanded. Between these extremes are a number of cases amenable to radical treatment, and for these the following operations have all been done: (a) Orchidectomy. The shock is severe and the operation not generally useful, and is now abandoned. (b) Vesicotomy. Slow and uncertain, and applicable to but a limited number of cases. (c) Perineal and suprapubic prostatectomy. Of these the most rational and scientific procedure is the suprapubic. In this the field is freely exposed, the gland readily reached, and easily shelled out of its attenuated capsule. The results are usually most satisfactory.

Dr. E. Clouse (Toronto) then read his paper, "Notes of an Uncommon Case of Rectal Surgery."

Dr. Clouse recounted a remarkable instance of a patient's unfortunate adventures with hemorrhoids. The patient, a prominent clergyman, fell into the hands of a quack, who attempted to do Whitehead's radical operation, but was so unfortunate in the result that the mucous membrane and the skin outside would not unite. Shortly after, having moved to British Columbia, he came under the care of a friendly jeweller. This ingenious individual invented for the hapless minister a manner of stem pessary, by means of which the rectum was kept in position. The clergyman wore this device for six long years, suffering the inconvenience and discomfort of having to remove it once or twice a day. Dr. Clouse now saw him again, and had in consultation several other prominent surgeons. They decided that nothing could be done to relieve the situation except a colotomy. This the patient refused, and again besought Dr. Clouse to do something for him. Dr. Clouse consented to try what could be done and, with the patient under an anesthetic, discovered that by snipping the skin just beyond the red border he was able to relieve the tension on the bowel, and a perfect cure was wrought.

Dr. J. H. Peters (Hamilton) prepared a paper on "Anomalies in Fetal Development, with Specimens."

The Secretary read Dr. Peters' paper, which gave an illustrated account of a fetal monstrosity exhibited. The specimen was what Hirst calls a celosoma and of the type agenosoma. The liver and bowels are exposed, with an absence of the genital organs. This is one of the two or three cases of agenosoma reported.

#### MOTIONS, RESOLUTIONS, ETC.

Moved by A. McPhedran, seconded by N. H. Beemer, That in the opinion of this Association there exists an urgent need for the establishment of hospital accommodation for the temporary reception and treatment of suspected and incipient cases of mental alienation. The establishment of such institutions offers the only efficient means for the cure of such cases, and would save many of them from the stigma of having been incarcerated in an asylum for the insane. Carried.

Moved by W. H. Smith, and seconded by F. Fenton, That the thanks of this Association are to be extended to the Automobile Club of Toronto for the kindness exhibited to the members in the very pleasurable ride about the parks of the city. Carried.

Votes of thanks were also passed to the President and Senate of the University of Toronto for the use of the Medical Building; to the retiring President, the Secretary, the Assistant Secretary, and other officers of the Association for their painstaking work in arranging for this excellent meeting.

The motion of Drs. Cameron and Thistle, that the Ontario Medical Association be changed to constitute a branch of the British Medical Association, was, on motion of Drs. Powell and McPhedran, referred to a committee to be named by the incoming President and Mr. Cameron, which committee should report to this Association. In connection with this Mr. Cameron pointed out that the membership fee of one guinea to the British Medical Association included the subscription for the *British Medical Journal*. By constituting this Association a branch of the British Medical Association, we would in no way interfere with our own autonomy. Dr. Bingham pointed out the difficulty already existing in getting men to attend the Ontario Medical Association meetings, and that the matter was one of too much importance to be passed over hurriedly.

The following officers were elected for the ensuing year: President, Dr. W. A. Burt (Paris); 1st Vice-President, Dr. J. L. Davison; 2nd Vice-President, Dr. George Hodge (London); 3rd Vice-President, Dr. Edw. Ryan (Kingston); 4th Vice-President, Dr. T. H. Middleboro (Owen Sound); General Secretary, Dr. Chas. P. Lusk (Toronto); Assistant Secretary, Dr. Samuel Johnston (Toronto); Treasurer, Dr. Fred T. Fenton.

The following names were elected by the Nomination Committee to serve on committees: Credentials—Dr. Olmstead (Hamilton), Dr. Boyd (Bobeaygeon). Public Health—Dr. Trimble (Queenston), Dr. Fraser (Thamesville). Legislation—Dr. H. D. Livingstone (Rockwood), Dr. Chas. Sampson (Windsor). Publication—Dr. Alex. Taylor (Goderich), Dr. W. J. Charlton (Weston). Ethics—Dr. H. A. McCallum (London), Dr. T. McKeough (Chatham).

# Dominion Medical Monthly

And Ontario Medical Journal

EDITORS:

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No. 2.

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## THE INFLUENCE OF BORIC ACID AND BORAX ON DIGESTION AND HEALTH.

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The elaborate and valuable investigations of Dr. Wiley, of the U. S. Department of Agriculture, on the influence of boric acid and borax on digestion and health, were commenced in the autumn of 1902. These investigations were not undertaken haphazard, but after a careful study of similar work in other countries, which certainly adds value to the U. S. observations. Twelve young men were selected from the Bureau of Chemistry and other branches of the Department of Agriculture. They were then pledged to obey and observe all the rules and regulations laid down for the investigations. The experiments were inaugurated in December, 1902, and concluded on July 1st, 1903, so far as boric acid and borax were concerned.

Briefly, the results may be summarized as follows:

(1) That boric acid and borax are almost, if not altogether, absorbed into the circulation from the intestinal tract: 80 per cent. of the total amount exhibited was recoverable in the urine, the rest being chiefly excreted through the skin, and only traces through the feces.

(2) Boric acid or borax, when administered with food,

appears rapidly in traces in the urine; but the experiments showed and proved that there was not any great tendency to accumulation.

(3) It was found that the most convenient method of exhibition was by capsules, as then there was no dislike created for the food, a dislike due largely to the mental attitude, and not to bad taste or flavor.

(4) When administered in the food in small quantities,  $\frac{1}{2}$  grain or less per day, no notable effects are observed; but given over a period of time, as in one case fifty days, there were observed periods of loss of appetite, fulness in the head, and distress in the stomach. These were not observed in everyone, as some are apparently more sensitive to the action of borax and boric acid than others. In these cases there was no tendency to either diarrhea or diuresis.

(5) As was to be expected, when administered in larger and increasing doses, the above symptoms are exaggerated, the most common one developing being a persistent headache.

(6) Upon the digestive processes the specific action of the drugs is not very well marked.

(7) The continued administration of boric acid and borax has a decided, well marked effect upon the weight of the body, as it causes a decrease in the desire for food; and during the administration of the preservatives there is a slight tendency to diminution in the weight of the body—a tendency which becomes so well fixed that it is not entirely eliminated for many days, even after cessation of the administration of the preservative. A point worth recording is that any effects produced are not of a permanent character.

(8) It is not advisable to use borax or boric acid in articles of food intended for common and continuous use, and even when incorporated in foods used only occasionally, the consumer has a right to know of it.

(9) The use of borax or boric acid as an external application to cured meats to preserve them during shipment is not condemned, as the quantity of the drug actually becoming incorporated in the food can never be great.

Summing up, it was found that in doses not exceeding  $7\frac{1}{2}$  grains a day, boric acid and borax were prejudicial when consumed for a long time, especially so with the young, the debilitated, and the sick; and that it would be a safe rule to adopt to exclude entirely these substances as preservatives from those foods used for general consumption.

The foregoing deductions, no doubt prepared with the greatest discretion and care, must stand as law so far as medical science is concerned, regarding the employment of borax and boric acid as preservatives of foods.

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## CANADIAN MEDICAL ASSOCIATION.

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We have the opportunity once again to draw the attention of our readers to the Thirty-seventh Annual Meeting of the Canadian Medical Association at Vancouver, B.C., from August 23rd to 26th. It is an opportunity to visit the Pacific Province which should be considered with more than ordinary care by all our readers; and especially do we desire to have our Toronto readers ponder over it. No doubt the next annual meeting will convene in Toronto, and this city is in duty bound to send a good delegation to Vancouver. If this duty cannot be performed, we are quite confident in stating that Toronto physicians will welcome warmly the Canadian Medical Association in 1905, and every effort will be put forward to surpass any meeting ever held. But this year we join heartily with Vancouver, and wish that city every success in surpassing its predecessors, and we understand there is every indication that Vancouver will eclipse her sister cities in the East.

Whilst the trip is a long one, and considerable time taken from practice, there is such splendid promise of good times and good profit that all who stay away will never cease regretting about it. Therefore, it cannot be too often or too forcibly brought home to our readers in the East, that we owe a duty and a debt to the West, who oftentimes before have journeyed over these vast prairie and mountainous tracts to attend our meetings in the East. Weigh the matter calmly and carefully, and see if you do not decide that your presence is desired in Vancouver in August. Many years will, no doubt, pass away before you are privileged to go again. This year—Vancouver; next year—Toronto; in 1906—Halifax, as we understand it is the purpose of the Maritime Medical Association to issue an invitation for that year. The Canadian Medical Association is prospering beyond conception. United and organized action will make us a powerful body to be considered with in the councils of Canada.

## NEWS ITEMS

DR. MAL. GALBRAITH has gone to Coldwater to assist Dr. Boyd, of that place, in his practice.

DR. J. H. McCULLOUGH, formerly of Owen Sound, Ont., died July 12th at Battleford, N.W.T.

DR. A. F. DEMARY, of Kerwood, has been appointed to a position in the sanitarium at Muskoka.

DR. LORD, of Forest, has entered upon his duties as house surgeon at the Sarnia General Hospital.

INFANT MORTALITY in Montreal has reached as high as 133 deaths in one week during the present summer.

DR. CHARLES MCKINLEY, of Georgetown, has been appointed associate coroner for the County of Halton.

DR. J. R. ARMSTRONG, house surgeon at Victoria Hospital, London, has resigned his position on the staff, and has begun practice in Oil Springs.

DR. W. W. JONES, of Mount Forest, has successfully passed his final exam. in London for a Fellowship of the Royal College of Surgeons, England.

DR. J. P. HUBBARD, Forest, Ont., has gone to Baltimore, where he will spend a month taking a special course with Dr. Kelly, one of the leading specialists of the United States.

DR. LAPTHORN SMITH, of Montreal, will leave on August 14th for a seven weeks' trip to Europe, going by the Hamburg-American SS. "Prince Adelbert" direct to Naples, and returning by the White Star "Baltic" from Liverpool to New York, reaching home about the first of October. His visit is principally for pleasure, but he hopes to spend a few days watching the work of Kocher and other celebrated European abdominal surgeons.

TO THE WORLD'S FAIR, ST. LOUIS, Mo., OVER THE WABASH LINE, in their new advanced twentieth century imperial blue trains, nothing finer on wheels. Round trip tickets on sale at single first-class fare. Passengers returning from this great exposition say the grandeur and magnitude is beyond their comprehension; that the Wabash is the best route, because it saves many hours of travel and lands you right at the World's Fair gates. Passengers leaving Toronto and west on evening trains

arrive in St. Louis next day at noon. New palace sleepers all the way. For rates, time-tables and descriptive folders, address J. A. Richardson, District Passenger Agent, north-east corner King and Yonge Street, Toronto.

#### TORONTO GENERAL HOSPITAL STAFF FOR 1904-1905.—

The following appointments have been ratified by the Trustees of the Toronto General Hospital for the ensuing year: W. B. Wright, Toronto; N. McLaurin, Toronto; W. A. McCauley, Warkworth; A. J. Fraleigh, Bloomfield; T. W. Rowntree, Thistledown; N. O. Fisher, Ashgrove; E. K. Cullen, Parkdale; J. A. Oille, Sparta; G. E. Smith, Toronto; W. E. Gallie, Barrie; T. Hair, Lavender; G. E. Greenway, Little Britain; W. B. Hendry, Toronto; H. R. Elliott, New Sarum. The outside staff is: A. W. Canfield, Woodstock; E. A. McCulloch, Thomasburg; A. C. C. Johnston, Toronto; W. S. Turnbull, Goderich; T. P. McKinnon, Toronto; W. S. Fawns, Udora. The Trustees decided to appoint two official anesthetists and also one medical and one surgical registrar, and one resident pathologist. Applications for the above appointments are to be sent to the Secretary, with qualifications. In our advertising columns will be noticed an announcement *re* these appointments.

CANADIAN MEDICAL ASSOCIATION.—In going to the Canadian Medical Association Meeting at Vancouver, August 23rd to 26th, have your tickets routed Canadian Pacific Railway to Vancouver or Victoria. If not returning direct by C.P.R., a good way to return will be over the Northern Pacific Railway as follows: Vancouver to Sumas on the boundary line, C.P.R.; Sumas to Seattle, N. P. R.; thence to Spokane and Livingstone (if visiting the Yellowstone National Park—a week's staging at \$49.50, meals and sleeping accommodation thrown in); thence to St. Paul; from St. Paul to Chicago be routed over the Chicago and Northwestern; from Chicago to St. Louis or Detroit go by the Wabash; C.P.R. direct to your home. If going through California after the meeting is over, have your tickets read Southern Pacific, Portland to Los Angeles or San Francisco; returning over Union Pacific through Salt Lake City, Denver and Kansas City; then Kansas City to St. Louis over Wabash; from St. Louis to Chicago over Wabash, or over Wabash to Detroit direct; Chicago to Detroit over Wabash; Canadian Pacific, Detroit to starting point. Seattle may be reached from Vancouver by Canadian Pacific Steamship Line (B. C. Coast Service).

## AMERICAN MEDICAL EDITORS' ASSOCIATION.

The thirty-fifth annual meeting of the American Medical Editors' Association, held at Atlantic City in June, 1904, was one of the most successful in its history, C. E. de M. Sajous, President, presiding.

The many papers presented, as well as the numerous applications received for membership, is possibly the best indication of the interest displayed in the Society. Among the new members who joined were the following: Dr. Herman Knap, editor of the *Archives of Ophthalmology*, New York; Dr. J. Madison Taylor, *Sajous Encyclopedia*, Philadelphia, Pa.; Dr. Joseph McFarland, *Medicine*, Philadelphia, Pa.; Dr. H. Longstreet Taylor, *St. Paul Medical Journal*, St. Paul, Minn.; William Davis, *St. Paul Medical Journal*, St. Paul, Minn.; Surgeon-General Walter Wymann, *Sajous Encyclopedia*, Washington, D.C.; Louis L. Pilcher, *Annals of Surgery*, Brooklyn, N.Y.; H. Enos Tuley, *Louisville Journal of Medicine*, Louisville, Ky.; Andrew Mac Phail, *Montreal Medical Journal*, Montreal, Can.; A. W. Wright, *Canadian Practitioner and Review*, Toronto, Ont., Can.; George Elliott, DOMINION MEDICAL MONTHLY, Toronto, Ont., Can.; E. E. Dorr, *Iowa Medical Journal*, Des Moines, Iowa; Frank B. Cross, *Lancet Clinic*, Cincinnati, Ohio; F. E. Daniel, *Texas Medical Journal*, Austin, Texas; William F. Waugh, *Alkaloidal Clinic*, Chicago, Ill.; Wm. J. Robinson, *Critic and Guide*, New York; Raymond Wallace, *Southern Medicine and Surgery*, Chattanooga, Tenn.; C. Sumner Witherstein, *Sajous Encyclopedia*, Philadelphia, Pa.; F. W. Samuel, *American Practitioner and News*, Louisville, Ky.; Arthur J. Patlk, *Wisconsin Medical Journal*, Milwaukee, Wis.; Langdon B. Edwards, *Virginia Medical Semi-Monthly*, Richmond, Va.; Clarence A. Smith, *Northwest Medicine*, Seattle, Wash.; Horatio C. Wood, Jr., *Therapeutic Review*, Philadelphia, Pa.; Albert E. Stern, *Medical and Surgical Monitor*, Indianapolis, Ind.; James U. Barnhill, *Columbus Medical Journal*, Columbus, O.; Samuel F. Brothers, *Medico Pharmaceutical Journal*, New York; Alfred B. Meacham, *Post Graduate*, New York; G. L. Harrington, *Brooklyn Medical Journal*, Brooklyn, N.Y.

Among the interesting papers read and thoroughly discussed, we would mention: "Proprietary and Patent Medicines," Harold N. Moyer, Chicago, Ill.; "Military Medical Journalism of the Present Day," Major J. Evelyn Pilcher, Carlisle, P.A.; "Sun-

down Journalism," T. D. Crothers, Hartford, Conn.; "Medical Illustrations," H. V. Wurdemann, Milwaukee, Wis.; "Medical Journalism of the Pacific Coast," Winslow Anderson, San Francisco, Cal.; "The Medical Press vs. The Modern Plague," William Porter, St. Louis, Mo.; "Reading Notices," W. C. Abbott, Chicago, Ill.; "Imitation Journalism," H. Waldo Coe.

Following an animated discussion of Dr. Porter's article relative to the use of patent nostrums, the following resolution, endorsing the action of Mr. Bok, editor of the *Ladies' Home Journal*, was favorably acted upon:

*Whereas*,—The public is, and long has been, suffering from the use of nostrums, and from the misuses of medicines, and,

*Whereas*,—The medical profession and press have endeavored by every means in their power to instruct the laity upon the subject, and,

*Whereas*,—Some journalists either do not understand the true situation, or find it to their pecuniary gain to favor the use of nostrums and pander to the greed of their manufacturers at the expense of the health or even the lives of their dupes among the people, and,

*Whereas*,—The eminent editor of the *Ladies' Home Journal*, Mr. Edward Bok, in an able and vigorous editorial on page eighteen of the May number of that journal, laid the truth of the matter before his readers, thus aiding in the work of warning and educating and conserving the health and welfare of the public, be it

*Resolved*,—That the American Medical Editors' Association approves and commends Mr. Bok for the intelligent, honest, fearless and well-grounded position he has taken, which has been thoroughly appreciated by us and by the medical profession generally.

*Resolved*,—That a copy of these resolutions be spread upon the Minutes of this meeting, be transmitted to Mr. Bok, and be published in the medical journals throughout the country.

Dr. Porter presented the following resolution bearing upon the death of Dr. I. N. Love, an ex-president of the American Medical Editors' Association:

Through the joys of to-day come refrains in minor key. We welcome our friends again, but some have dropped out for ever. One day eager in all that makes the activities of life—the next cold and silent on the bosom of the dark, mysterious river. Dr. I. N. Love was no ordinary man. Endowed as few are, he cultivated the art of showing to others the natural buoyance of his nature and keeping well within himself the burden and shadows that few knew of and the many never dreamed of. No one was

better known in the medical societies of the country and especially in this Association. Quick, witty, generous, he made friends at every turn, and if to-day he made an enemy, to-morrow he was likely to kill him with kindness.

Of his work as a physician and an editor, you who were his friends through the decades, need not be told. As a physician he was sympathetic and intelligent beyond the possibilities of most men. The devotion of his patients was a natural sequence following the sunshine of his presence in the sick-room. As an editor he was original and personal, but his personalities were more likely to be eulogistic than censorious. He called his Journal "a reflex of the medical profession," but it was more notably a reflex of his own life.

Realizing the difficulty of expressing a just appreciation of the life of one so brilliant, so fascinating and energetic, yet in token of the sense of loss sustained by the Association, be it

*Resolved*,—That the members of the American Medical Editors' Association, while mourning the decease of Dr. I. N. Love in the zenith of his manhood and opportunities for usefulness, remember and cherish the recollection of all in his most attractive individuality that made his record so large a part of the history of this Association.

*Resolved*,—That a large page of our record books be set apart for the resolutions, and that a copy be sent with our truest sympathy to the members of his family.

W. M. PORTER.  
C. F. TAYLOR.

A committee was appointed by the Chair, composed of C. F. Taylor, chairman; Dr. Hogehead, of San Francisco, Cal., and Dr. Pilcher, of Carlisle, Pa., and the Secretary, member *ex officio*, to draft a new Constitution and By-Laws to be presented at the next meeting.

The following officers for the coming year were elected: President, Harold N. Moyer, Chicago, Ill.; 1st Vice-President, C. Evelyn Pilcher, Carlisle, Pa.; 2nd Vice-President, O. F. Ball, St. Louis, Mo.; Secretary and Treasurer, J. MacDonald, Jr., New York; Executive Committee: C. E. de M. Sajous, Chairman; John Punton, W. A. Young, W. C. Abbott, H. M. Simmons, C. F. Taylor and Chas. Wood Fassett.

This Association now enjoys a membership of over one hundred active medical editors, and those medical journalists not now associated are invited to present their applications for membership to the Secretary, Dr. J. MacDonald, Jr., 100 William Street, New York City, N.Y.

# Dominion Medical Monthly

And Ontario Medical Journal

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VOL. XXIII.

TORONTO, SEPTEMBER, 1904.

No. 3.

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## Original Articles

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### PRESIDENT'S ADDRESS.—CANADIAN MEDICAL ASSOCIATION, 1904.\*

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BY SIMON J. TUNSTALL, B.A., M.D., VANCOUVER, B.C.

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*Mr. Chairman and Gentlemen,—*I feel that my first duty tonight is to offer you my very hearty thanks for the honor you have conferred upon me in electing me President of the Association for the ensuing year.

When I recall the names of those who have preceded me in this chair, I can only ask your indulgence for the deficiencies you may find in me, of which I am very conscious, and express the hope that under my presidency the interests of the Association may in no wise suffer nor its honor be in any way tarnished.

The present occasion is no ordinary one. In the appointment of a President from among the members of the Association whose home and work lie in this far distant portion of the Dominion, and in our meeting here to-day at the Doorway of the West, a new departure has been made.

I am far too modest to suppose for an instant that any particular merit of mine has induced the Association to make this departure; rather I conceive it to be due to a general recognition of the claims and standing of the western members as a whole, and of the growing importance of this fair Western Province.

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\*Delivered at meeting of Canadian Medical Association, Vancouver, B.C., August, 1904.

I should be performing my duties but poorly did I not seize this opportunity to thank you on behalf of my western confreres, and on behalf of the people of this Province in general, and of this city in particular, for the compliment you have paid us in selecting this Province and this city as the place of meeting for this year, and I feel I am only expressing their wishes in tendering you a hearty western welcome to our midst, and their hopes that your brief stay among us will be both pleasant and profitable to you all.

To many of you, probably to most of you, the rapid progress and general development of this young Province will come as a surprise. It does to most of our visitors from the older parts of the Dominion who know how recent has been the settlement of the West. And certainly, looking round one, it does seem scarcely realizable that the site of this rapidly expanding city, of which its citizens are so justly proud, and the very spot on which this building stands, surrounded by so many comforts and refinements of modern life, was, less than two decades ago, a wild and almost impenetrable virgin forest, the haunts of the bear, the deer and the primitive savage.

It is less than a score of years by two that the incorporation of this city took place, and yet to-day it will compare favorably with many cities of the older Provinces twice and thrice its age. From the medical standpoint it is reaching after a high ideal.

The incomparable water supply, which is brought in close steel conduits, from the bosom of the mountains to the north of us; the sewerage system, with its septic tanks, that deliver their effluent into tidal waters; the paved streets, with their array of cleaners; the cement sidewalks which are now throughout the city rapidly replacing the earlier and cruder planking; the public and private hospitals; the General Hospital, which is now being built, and which, when finished, will be the peer of any hospital of its size, all make it clear that we are endeavoring to keep abreast of the times, as well in sanitary as in other matters.

It is no idle boast, then, if I say that in the West events move rapidly. Time is no sluggard here, and we see history fashioning itself before our eyes. The whole of this great Province was in indisputed possession of savage aborigines a half century ago. The closing years of the first half of the nineteenth century saw the first real settlement made on Vancouver Island at a place called Camosum, in the native tongue, now Victoria, the capital of the Province.

A few years later, in 1858, an Act was passed in the Home

Parliament to provide for the government of this new colony, thereafter to be known as British Columbia. From this date the real settlement of the Province begins. The discovery of gold in the Fraser and Cariboo soon made these districts as famous and as widely known as Sacramento or Ballarat and a great influx of population was the result. But a very few years later the conception of that colossal and momentous undertaking, the building of the Canadian Pacific Railway, began to shape itself in men's minds, and was finally carried out. You are all, doubtless, familiar with the history of this great undertaking and know the almost insuperable difficulties its earlier promoters had to contend with, and how in the end, in spite of political, natural and every other obstacle and hindrance, they successfully carried through the scheme and made possible the union of British Columbia and the great North-West with the rest of Canada, and gave us as a result that splendid heritage, that united land which stretches from ocean to ocean, from the rising of the sun to the going down thereof—a land of which all her sons and daughters are so proud—our beloved Canada.

It is gratifying to the profession to know that it has been ably and honorably represented among those history-makers in the persons of Drs. Helmcken and Tolmie, who were the first medical men to settle in the colony, about the middle of the last century. Both took prominent parts in the earlier events of the Province. The former still remains with us; the latter has gone to his rest. Prior to their advent the native Medicine-man had it all his own way.

There is a significance, not without interest to my mind, in the fact that this Association, representing as it does to-day in its various members the highest medical knowledge of this enlightened part of the world's history, should meet here in this new country, where Shamanism, or the cult of the savage Medicine-man, so recently prevailed, and does to some extent still prevail. The old and the new order of things are thus brought into suggestive contrast and juxtaposition, and we are led naturally to reflect upon the stages and steps we have passed since the days when all medical knowledge was comprised in the superstitious and rude practices of our savage prototypes; and in spite of our sometime failures and our lack of knowledge, still in certain directions the reflection on the whole is a pleasant and gratifying one, both to ourselves and humanity at large. It certainly would not be the least interesting of subjects were I to attempt on this occasion a general survey of the march and progress of medical

science from the days and practices of the primitive Medicine-man as we find him even in this Province, down to the times and discoveries of Lister, Pasteur, Virchow and their followers.

But it is not my intention to undertake such a task to-night, interesting and appropriate as it might under the circumstances be, although I cannot leave the subject without calling your attention briefly to a fact of which all of you may not be aware, and which gives pertinence to my reference to the old-time Shaman or Medicine-man. We are all familiar with hypnotism, but there are few of us, perhaps, aware that in the employment of hypnotism as a therapeutic agent we are returning to primitive methods, to the practice of our savage prototypes. Those who have made special study of the practices and customs of savage races inform us that the primitive doctor, or Medicine-man, was not that self-conscious fraud and humbug, knowingly duping his credulous patients, he is thought to have been, but a person who had a real belief in his own powers and cures; and that those powers and cures were, when genuine, generally, if not always, attributable to hypnotism, especially to that phase of it known as suggestion. A state of hypnosis was induced in his patient by the monotonous droning of his medicine song and the noise of his rattle, and when in this condition his attempt to extract the spirit of the disease from the patient's body, and his statement that he had presently accomplished it, acted suggestively upon the imagination of the patient and effected the cure. "Extremes meet," and "there is nothing new under the sun," we are told, and the school of Nancy, which is founded upon the suggestive phase of hypnotism, is not a new practice, but an unconscious return, or rather I should say it is an unconscious modification and extension of these primitive methods which were in vogue among our savages here up to a few years ago, and may be to this day, for aught I know to the contrary.

But enough on this head. It is my intention rather to bespeak your consideration to-night of a point or two which I, in common with many of the members of the profession, have very much at heart, and which I deem of such importance as to merit our most careful consideration and endorsement.

I have reference, in particular, to: 1. The Canadian Medical Protective Association. 2. The Federal Health Bill. 3. The Dominion Medical Council. 4. The Treatment of Inebriates.

With regard to the first, The Canadian Medical Protective Association, I would desire to urge upon members the strong claims this Association has upon the profession. I am among those who believe in the need of such an Association, and that it

may be made a valuable means of assisting and protecting members of our profession from wrongful actions at law, to which we are all of us at all times liable; actions brought by irresponsible persons for alleged malpractice, or by unscrupulous persons for the purpose of obtaining money under threats of injury to our professional character.

It is well known that a medical man's professional prospects depend to a very large extent, if not entirely, upon his professional reputation, and it is not difficult, therefore, for unprincipled persons to attempt to levy blackmail upon him by threatening to bring action against him for malpractice or professional incapacity, which action, though wholly groundless and undeserved, may have the most disastrous effects upon his career and pocket.

During the past two years the Association has fought out several such cases successfully, and has amply demonstrated its usefulness and justified its existence. It is, therefore, a matter of wonderment to many of us that the Association has thus far received so little encouragement or support from the profession as a whole. Out of a possible 5,500, the total membership last year was only 252. This is altogether too small a number to make the aims and work of the Association effective or sustain it in a solvent condition, and I welcome this opportunity to invite your earnest co-operation in enlarging its membership and strengthening the hands of the Executive, and would to this end suggest that a special committee be struck during the Convention for the purpose of considering how best to enlist the sympathies and support of our brethren who are not yet members. I cannot but think that a large increase in the membership must inevitably result if the aims of the Association be once rightly understood.

The objects of the Association are such as all can subscribe to. It is not intended to defend or assist in defending unworthy members, or those who are actually guilty of malpractice, or who have brought discredit upon the profession. It aims rather to assist the worthy, those of its members who are wrongfully charged and whose character and reputation are placed at stake; and also to deter irresponsible and unscrupulous persons from bringing action against members of the profession for the purpose of spiting or injuring them, or of exacting a bribe for their silence; and it is only by uniting ourselves together in such a way as this Association offers that we can hope to secure the support of our brethren and become immune to many attacks which would otherwise be made upon us.

I feel, therefore, that we have but to devise some plan of arousing the interest of our brethren in the matter to ensure their support and co-operation.

And now a word or two as to the Federal Health Bill. Thanks to the energetic efforts of the special committee appointed to attend to this matter considerable progress has been made towards the attainment of our desires in this behalf. The interest and sympathy of the Ministers of the Crown have been secured, and the Minister of Agriculture, the Hon. Mr. Fisher, under whose department the matter more directly falls, has taken the matter up most courteously and is thoroughly alive to its urgency and need. For the information of those not familiar with this subject, I would briefly say that the Association, at its meeting in Montreal in 1902, placed itself on record by resolution to the effect that it is expedient that a Department of Public Health be created by the Dominion Government and administered under the authority of one of the existing Ministers of the Crown, thus bringing all general questions relating to sanitary science and public health under one central authority to be known as the Public Health Department. There is no need for me to dwell upon the importance or desirability of this step; it must commend itself to every member of the profession.

Thus far the Government has not seen its way to grant the desired measure. The work is not yet accomplished, and the need of pushing the matter still exists. I sincerely hope the meeting will not dissolve without first passing a strong resolution in favor of the measure, and thus encourage and strengthen the hands of the committee who have this work in hand.

And now I desire to touch upon my third point, which I regard as of the highest importance. I refer here to the Dominion of Canada Medical Act, which was assented to in the Federal House in 1902. We are under a deep debt of gratitude to the members of the special committee, and especially to Dr. T. G. Roddick, for his untiring efforts to get this measure placed upon the statutes of the country, and it is with great regret that I notice so much misapprehension as to the scope and powers of this Bill still exists in certain quarters. It has been thought that it would encroach upon the rights and privileges of the different Provincial Medical Boards and interfere with their autonomy, and I gladly hail this opportunity to say a few words which may help to remove this misapprehension. It was, and is, not in any way intended to interfere with existing provincial rights or trench upon the prerogatives of Provincial Medical Boards. As an instance, in my own native Province, Quebec, our French-

speaking brethren will have the right of examination in their own language.

Provincial registration and Provincial Boards will still continue to exist, and each Province will be at liberty to fix whatever standard it pleases for its own practitioners. They can, where they wish, continue as examining boards with power to grant provincial licenses, as they do now, and in any case in their hands will be left all matters relating to taxation and professional discipline.

The Bill is a purely permissive one, and though it has been placed upon the statutes of the country, it will be necessary, before it can become operative, to have the consent and co-operation of all the Provincial Medical Boards. Each Provincial Board will have to seek a slight amendment to its present Medical Act. This is all that is now required to make this most desirable measure effective, and I sincerely trust that this consent and co-operation will not be long wanting, for the aims and scope of this Act are such as should commend themselves to every member of the profession. Briefly, I would say that the main purpose of this Bill is to establish a Central Medical Council of Canada, with power to examine candidates and grant licenses, the possession of which shall ensure to the holders thereof such a medical status as will enable them to practise not only in all parts of the Dominion, but in the United Kingdom as well, or, indeed, in any portion of His Majesty's Empire, in short, to do away with those mortifying disabilities under which a medical man trained in Canada now labors, and put him up on a footing of professional equality with his brethren in other parts of the Empire. This is assuredly a laudable and most desirable object, and one which, in my humble opinion, should call forth the best efforts of each one of us to bring about its accomplishment; and I sincerely trust that some concerted action will be taken in this matter before the meeting closes.

It is the least, I think, we can do to show our appreciation of the strenuous efforts exerted in securing the passage of so important a measure.

This brings me to my fourth and last point, "The Treatment of Inebriates." A conviction has been steadily growing in the minds of most medical men of late years that something should be done for the care and control of dipsomaniacs and inebriates in the form of founding establishments combining the main features of a hospital and an insane asylum, where drunkards could be legally confined under medical authority and treated in a systematic and enlightened manner. The practice, hitherto, of

treating them as criminals subject to a fine or short periods of confinement in the common prisons of the country, has been shown to be wholly unsatisfactory and often productive of the greatest evil to themselves and those who may be dependent upon them.

There can be no doubt, I think, that the care and treatment of those unfortunate members of society is a question of the gravest and most vital importance, and should command the interest and attention of medical men as a subject, which, coming well within their province, affects so seriously the general commonwealth.

A movement towards this end has already been taken in Ontario, and a Bill drafted, the principles of which have received the endorsement of the Toronto Medical Society, and also of our own Association; but what we want is a Dominion Act affecting the whole country; and it would be the source of the greatest satisfaction to me if this meeting would take this question up seriously and nominate a committee to draft a measure that could be submitted to the Federal authorities. This could be done either on the lines of the Ontario Bill or any others that might commend themselves.

Speaking, personally, I may say that I shall be only too glad to help in drafting such a measure and giving any other assistance in my power, for I am convinced that the adoption and carrying out of the provisions of a bill of this kind will do much to diminish the volume of sickness, pauperism, vice and crime that now stains the annals of our country and restore to lives of usefulness and self-respect many of those poor unfortunates whom it is the design of such a measure to control and help.

Before closing my address, I wish to express to our visiting brethren my appreciation of the kindly feeling and interest which have actuated them in taking part in the deliberations of our National Association, and to hope that their stay may be fruitful of pleasant reminiscences.

And now, gentlemen, I must thank you for your kind reception of me as your President this year, and for the patient and courteous hearing you have given to my remarks, and trust that the suggestions I have ventured to offer may meet with your approval and receive your support.

**TREATMENT OF PROSTATIC HYPERSTROPHY.**

BY T. K. HOLMES, M.D., CHATHAM, ONT.

Prostatic hypertrophy is so common in advanced life and so surely undermines the health and embitters the declining years that its treatment must always appeal to medical men very strongly.

Until quite recently the use of the catheter afforded the chief and almost the only means of relief. This is only palliative, and so often leads to infection of the bladder, with all its concomitant evils, that I have no hesitation in saying that it should never be resorted to by any unskilled person. I have never known a patient to use a catheter himself for any considerable length of time without causing infective cystitis and its resulting train of distressing and dangerous sequelæ.

Within the past few years various operative measures have been tried for the cure of this ailment, and the accumulated experience resulting from these have enabled surgeons to estimate pretty accurately the value of each. Castration, vasectomy, prostatectomy, and the Bottini operation are the only radical methods of dealing with prostatic hypertrophy advocated at the present time. There are undoubtedly cases in which castration or vasectomy has proved beneficial, but there are obvious objections to these operations, and the results are so uncertain that they are not likely to be adopted in many cases. I have tried both several times, but probably from lack of skill in the selection of cases, none of them were cured, and I soon abandoned these modes of treatment. Prostatectomy was formerly considered an operation of much danger and difficulty, but modern technique has overcome these to a great degree. The mortality in skilled hands is quite low, and the results when recovery takes place are so good, that it is likely to be the operation of choice in a large number of cases. Men who have not had their general health injured much by the disease, whose kidneys are sound, and in whom general anesthesia would be safe, bear prostatectomy well. On the other hand, the Bottini operation, which can be performed under local anesthesia, is well suited to men of low vitality, to whom general anesthesia would be dangerous, whose kidneys may have undergone

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organic change, and whose general condition would render them incapable of prolonged confinement in bed. This operation has also given excellent results in younger prostatics whose general condition is good, so that I feel sure it has a wide scope of usefulness when skilfully carried out. I have spoken to many surgeons both in Europe and America about the Bottini operation, and have found that it is generally looked upon with disfavor, but I have further observed that the unfavorable opinions expressed are by men who have had little or no experience with it. The chief objection raised is that the operation is done under circumstances that render the destruction of the tissue uncertain in extent; that drainage, which is important when there is cystitis, is not well secured, and that the operation is not entirely free from danger. These objections have been largely overcome by improvement in the Bottini apparatus, and by the careful and systematic use of the cystoscope to determine the size and character of the enlarged gland, preliminary to treatment. Whatever plan of radical treatment be adopted, it is desirable to first endeavor to secure as healthy a condition of the urinary apparatus as possible. This can be done by suitable diet, by irrigation of the bladder, and by the administration of urotropin, in doses of eight or ten grains, three times a day.

In prostatectomy, the gland may be reached through a suprapubic opening, or by a perineal incision, or by a combination of both. In my own practice I have found the perineal route so satisfactory that I have always adopted it. The operation of suprapubic lithotomy has convinced me that in a man with thick abdominal walls it would be far from easy to reach the gland with the finger to enucleate it, whereas in a similar case the gland can be easily drawn down into the perineal wound and enucleated with great facility. If a patient has passed the age of sexual vigor, the plan of operation recommended by Darker Syme I believe to be the most satisfactory. The various steps in the operation are as follows: Place the patient in the lithotomy position with his hips well elevated; introduce a grooved sound; make a median skin incision about two and a half inches long, terminating posteriorly near the anus and deep enough to divide the tissue covering the muscles; retract the muscles and divide the recto-urethralis transversely near its anterior attachment and retract this muscle backward towards the rectum. This will expose the membranous urethra, which may be opened by cutting down in the grooved sound, and the incision should be continued until the gland is reached

and slightly incised through its capsule. Now remove the sound and explore the bladder with the finger and determine the size and shape of the part to be removed. If a stone is present, remove it with stone forceps. Syms' rubber bag should now be introduced into the bladder and moderately distended with water and the stem clamped with forceps. Traction on the bag will now bring the gland within easy reach, and while the left hand retains it in this position, the right index finger can be insinuated between the gland and its capsule at the point where it has been divided, and by gentle means the whole gland, or one lobe of it, can be enucleated. During the enucleation of the deeper part, it facilitates the operation to seize the gland with lobe forceps and make moderate traction.

Having removed one lobe, the other is dealt with in the same way. Instead of cutting backward through the capsule when the urethra is opened, I have sometimes found it more convenient to snip the capsule of one lobe with scissors, enucleate it in the usual way, then deal with the opposite lobe in the same way. The bag may now be allowed to collapse by letting the water escape, when it can be easily withdrawn from the bladder, and all blood flushed out by hot saline or boracic acid solutions. There is not much hemorrhage if care be taken to avoid the plexus of veins in the capsule. In this operation the only muscle cut is the recto-urethralis, and so very little injury is done to the perineum. The superficial part of the wound may be closed anteriorly by cat-gut sutures. At first all the urine passes through the perineal wound, but this gradually closes, generally in from three to seven weeks. When there has been much cystitis the prolonged drainage through the perineum is advantageous. Before enucleation begins a bar can often be felt at the neck of the bladder between the lateral lobes, which disappears when these have been removed, which shows it to have been merely a ridge or normal tissue. Of course, if there be a middle lobe of gland tissue, it must be taken away also. This operation can be done quickly, generally in ten to fifteen minutes, and there is little hemorrhage and no shock. In this operation the ejaculatory ducts which open into the urethra just near the apex of the gland are usually injured or destroyed, but if the sexual function has disappeared this is immaterial. In younger men the injury to these ducts may be avoided by adopting a plan devised by Dr. Young, of Baltimore. This consists in making a small opening in the membranous urethra, without extending the cut backwards to the gland. A metal tractor, which was exhibited, is then introduced into the bladder

through the incision in the urethra. One blade is made to revolve 180 degrees, and fixed there by the screw. By this means the two blades may be made to engage the lobes of the gland, and by pulling downwards the parts to be removed are brought prominently into the wound and the operation performed under visible control. With the gland drawn prominently into the wound by the tractor held in the left hand, an incision on each side of the urethra is made through the extravesical capsule nearly the whole length of the lobe. Between the incisions is a bridge of tissue covering the urethra in that part of its course, and containing the ejaculatory ducts, and by enucleating the lobes through these two incisions the ducts are left intact. After the lateral lobes have been removed, the median lobe, if one be present, may be pushed into one of the cavities by pressure, with the fingers inserted in the opposite cavity, aided by one blade of the tractor, and removed in that way.

I have found rather more difficulty in Dr. Young's method than in the use of the rubber bag, but he has acquired such facility in this branch of surgery that what would be difficult to less experienced surgeons is very easy to him. Dr. Young advises continuous irrigation of the bladder for several days if there has been much cystitis. This is accomplished by a double tube introduced through the wound in the urethra and connected with a reservoir, which is kept filled with a warm salt solution, and the return flow is conducted into a receptacle on the floor through the return flow tube.

In two operations recently performed I irrigated the bladder for a few minutes with hot boracic solution until it returned free from blood, and used no further irrigation. Neither of these cases had any trouble from omitting the continuous irrigation, and both made excellent recoveries.

In suitable cases the Bottini operation, as performed by Dr. Young, is one of the most satisfactory in surgery, and has some advantages that must always commend it. It can be done under local anesthesia; it is comparatively painless; a patient can be out of bed in two days; the results are excellent, even a feeble patient bears it well, and there is little constitutional disturbance during convalescence. It is in this operation that the skillful use of the cystoscope is all-important, for by its use the surgeon is guided as to the size of the cautery blade to be used and the length of the cut to be made. I here exhibit both the cystoscope and the cautery apparatus. Having decided by the former and by digital examination per rectum which blade is adapted to the case in hand, the patient is placed in the dorsal

position, with the knees drawn up and the feet supported by stirrups. The bladder is now washed out with warm boracic acid solution and an ounce of a 4 per cent. solution of cocaine injected so as to anesthetize the whole mucous membrane, especially the part to be incised and also the urethra. From four to eight ounces of boracic acid solution is next injected into the bladder, the instrument introduced, and the beak turned backwards, where its point can be felt by a finger in the rectum. A stream of cold water is kept flowing through the instrument during the time the blade is heated. The instrument having been placed so that the blade when moved from its slot by the screw in the other end of the instrument comes in contact with the part of the gland to be incised, and all connections having been previously made and tested, the switch on the transformer is moved far enough to bring the blade to a white heat, and it is gradually forced into the gland by the screw which moves it. The blade is thus moved into the substance of the gland at the rate of one centimetre per minute until sufficient tissue has been destroyed, when the current is turned off and the instrument moved in order to make the second cut. Usually three cuts are made, one posteriorly and one on each side. It is well to keep the current on and the blade hot while moving it back into the slot, as it destroys more of the gland and prevents hemorrhage. Dr. Young makes the lateral cuts first. In a case with a pedunculated middle lobe there is risk of destroying the pedicle and leaving the lobe loose in the bladder, but such a condition seldom exists, and can be recognized by the use of the cystoscope. It need scarcely be added that asepsis throughout is essential.

To avoid tedious repetition and to curtail the length of this paper, I shall report two cases, one a prostatectomy and the other a Bottini operation, as they furnish fair examples of the kind.

CASE 1.—A man at 63 years of age, good family and personal history. Had noticed a growing discomfort in the urinary organs for seven years. At first there was increased frequency in urination and a diminution in expulsive power, with dribbling at the end of urination. These symptoms gradually grew worse, until at times the urine came only in drops or in a very weak stream. The rest at night was disturbed; there was an unpleasant aching sensation about the bladder and perineum all the time. He had never used a catheter, and the urine was normal. There were two ounces of residual urine. Cystoscopic examination showed moderate enlargement of the lateral lobes and a bar joining them. There

was no cystitis. The sexual function was uninjured. Pressure on the gland per rectum gave pain, and a considerable enlargement could be felt by the examining finger.

The Bottini operation was performed as described above, three cuts being made almost without pain. The patient remained in bed two days, after which he remained up and moved about freely every day. There was considerable pain in urinating at first, but this gradually became less, and in three weeks disappeared altogether. There was no acceleration of pulse or rise of temperature at any time during convalescence, but the urine contained blood for several days, and small sloughs continued to pass at intervals for nearly three weeks.

Several months have now elapsed and he remains well, not requiring to rise at night, and passing urine about from four to six times a day. The stream is normal in size and force, and he expresses himself as perfectly well.

CASE 2.—A man at 76 years, with good history, began to have the usual symptoms of prostatic hypertrophy nine years ago, but was not obliged to use a catheter until four years ago, since which time he has had a most distressing cystitis, and has to use a catheter several times a day. In October last he had a severe attack of orchitis, and it was for this that he consulted me. I found the urine ammoniacal and loaded with pus, the testicle swollen and painful, and the prostate large and tender. There were eight ounces of residual urine. I administered urotropin, and as far as possible aimed at improvement of his general constitution, irrigating the bladder night and morning with warm boracic solution. Finding it impossible by this means to get rid of the pus, after a trial of three weeks, I decided to remove the gland, which I did by the Parker Syms method, as already described. The operation occupied fifteen minutes and was followed by no shock whatever. In this case, instead of incising the urethra backwards into the gland, I merely cut backward far enough to reach it, then with blunt scissors snipped an opening into the capsule of each lobe, and enucleated them in succession. There was no median lobe, but merely a collar stretching from one lobe to the other across the neck of the bladder. When the lateral lobes were removed this collar disappeared. The temperature rose to 100 deg. F. the first evening, but remained normal after that. He remained in bed a week, and the perineal wound was entirely closed at the end of three weeks. A month after the operation he urinated without difficulty every two or three hours, and his general condition was greatly improved. I

here exhibit the gland. The large lobe was removed from the left side, and the smaller one from the right side. At present, six months after the operation, there is no residual urine, and that passed is normal in appearance and in constituents.

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## A GROUP OF CASES OF MALIGNANT DISEASE— INFECTION OR COINCIDENCE?

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BY R. N. FRASER, M.D., C.M., M.R.C.S. (ENG.), THAMESVILLE, ONT.

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It may be safely stated that nothing is yet definitely settled as to the etiology of malignant growths. Many theories have been advanced, but all lack sufficient evidence to substantiate them beyond reasonable doubt. It is pretty generally accepted that heredity plays an important part, but it must be remembered that many influences besides blood relationship similarly affect all members of a family, such as place of residence, diet, intimate association, care for each other in time of sickness, etc. The female sex, especially, would be apt to feel the effects of these influences, and we find cancerous disease much more prevalent among them than among persons of the opposite sex, though it is said to descend as readily from father as from mother. A few years ago the ravages of consumption in certain families were considered sufficiently explained when it was said that "it runs in the family." Now we have learned that just such influences as I have mentioned furnish the favorable conditions under which that disease is contracted one from another, and that heredity only supplies the suitable soil for the cultivation of the bacillus. True, malignant growths occur, as a rule, long after the family has been broken up and its members separated, but mere lapse of time would not in itself be conclusive evidence that such influences had nothing to do with the result. We know that the periods of incubation of known infectious diseases vary greatly, and it may be possible that there is a class of unknown infectious diseases in which this period is very greatly prolonged, and the process much complicated. The weight of opinion, however, is pretty strongly

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opposed to any theory of infection, and certainly if any form of malignant growth is infectious, it must be so only under certain peculiar conditions and upon principles not at all, as yet, understood. The half dozen cases which I am about to relate, and with all of which I was directly or indirectly concerned, seemed to be in some way linked together. I know of no means of tracing the connection, nor of any theory which would explain it if it did exist. Heredity certainly had nothing to do with these cases, as the family histories were all clear up to the commencement of the series.

CASE 1.—E. T., aged 69; family history good; previous health good. In the autumn of 1894 began to complain of indigestion and distress at the stomach. His general health gradually failed, and he was obliged to quit work early in the summer of 1895. A tumor then developed, and a diagnosis of cancer of the stomach was made by his attending physician. The remainder of his illness was characteristic of that disease, and he died August 8th, 1895. There was no autopsy, and consequently the growth was not subjected to microscopic examination.

CASE 2.—This case was reported very fully by me in a paper read before this Association in 1899, and was somewhat remarkable in that, notwithstanding the very malignant nature of the growth, as evidenced by its frequent recurrences, as well as by microscopic examinations, the case ended in recovery. F. G. A., aged 40, married; druggist; family history good; previous health good. Had an attack of mumps in 1883, with orchitis and partial wasting of the testicles. During the fall of 1894 there was slight soreness of the right testicle when he was much on his feet. In July, 1895, he visited at the home of E. T. (Case 1), for a few days, and again returned a few days before the death of the patient, who was his step-father. After the funeral he slept one night in the room in which Mr. T. had died, and which had been occupied by him and his wife during the whole time of his illness. Little, if any, change, had been made in the bed and bedding after the patient's death. In September, 1895, he had a pretty severe attack of pain in the right testicle, and similar attacks afterwards occurred about once a month. There was also some enlargement, which did not completely subside between the attacks. In August, 1896, the testicle became greatly enlarged, and there was constant, though not very severe, pain. It was removed October 16th, 1896, and was found to be the seat of malignant disease. There was soon a recurrence in the cord and infiltration of the cicatrix,

and at this period the case was placed in my care. I amputated the end of the cord December 17th, but there was again a recurrence in January, 1897. I now adopted Coley's method of treatment, but the tumor gradually increased in size and soon began to fungate and bleed. In order to delay the period of fungating, and not from any hope of permanent benefit, I removed the growth on February 8th, and the wound again healed nicely; but a month later another small tumor was detected. Toxine treatment was resumed, but by April 12th the size of the growth having increased until it extended from a little above the external ring to the lowest part of the scrotum, I again removed the whole mass. On May 20th, two small nodules were removed from just beneath the pubic arch. In June, 1897, I began the internal administration of arsenic, together with electrolysis and cataphoresis, according to the method of Dr. J. McFaddon Gaston, of Atlanta, Ga., who had succeeded by this method in saving the life of a boy who had been pronounced incurable by some of the best surgeons of the South. This boy remains well at the present time, and several other cases have since been reported by Dr. Gaston, Jr.

At the time of commencing this line of treatment, the malignant growth had been five times removed by the knife; there was a small rounded tumor at the side of the scrotum, while infiltrated tissue extended for eight inches in length and more than an inch and a half in breadth, and the glands in Scarpa's triangle were slightly enlarged. In less than a month there was a noticeable lessening of the infiltration and diminution in the size of the glands, though the tumor showed no sign of improvement. I varied the applications of electrolysis somewhat, but still the mass continued slowly to enlarge, and it was therefore removed with the knife on August 30th. A week later treatment by cataphoresis was resumed, and on September 21st another small tumor was removed by the knife. Again, on December 31st, 1897, a soft mass, the size of a walnut, together with some infiltrated cicatrical tissue, was removed. This time no ligatures were required, the wound healing by primary union, but there was a good deal of thickening in the line of the cicatrix, which lasted for some weeks, and from previous experience we expected a recurrence, but the thickening gradually lessened, the tissues assumed a normal appearance, and since that time there has been no recurrence. Electrolysis and cataphoresis were continued uninterruptedly until the patient had passed the three year limit, and he was also kept under the medicinal treatment the greater part of that time.

The new growth consisted of adeno-carcino-sarcoma, and was reported upon by Drs. J. Caven and H. B. Anderson, of Toronto, and Dr. T. Cullen, of the Johns Hopkins Hospital. The patient is now, six and a half years after the last operation, an active and useful member of society, and weighs twenty pounds more than before his illness.

CASE 3.—Mrs. E. T., widow of E. T. (Case 1), aged 69, family history good; was twice married; had six children by her first husband, and had a miscarriage in the early months of pregnancy after her second marriage, at the age of about 43. Suffered from menorrhagia after this until the menopause, which occurred at about 55. Otherwise her general health was good, with the exception of occasional "sick head-aches." She was the principal attendant upon her husband during his illness with cancer of the stomach in the summer of 1895, and she made a lengthy visit to her son, F. G. A. (Case 2), during the spring and summer of 1897, while he was in the worst stage of his illness. In the summer of 1898, she began to complain of flatulence and abdominal distress, and upon examination the uterus was found enlarged and almost filling the pelvis. About the middle of October she was taken with pains similar to labor pains, with some loss of blood. A moderately large fleshy mass was found protruding from the os, and this was easily detached and removed. Other masses could be felt within the uterus, and two of the larger of these were removed with a placental forceps, after which the pain and flowing were greatly diminished. The uterus, however, continued to enlarge, the bowels became obstructed, and the patient died November 6th, 1898. The tumor was examined by Dr. H. B. Anderson, of Toronto, who pronounced it a round-celled sarcoma, probably originating in what was originally a myomatous tumor.

CASE 4.—Mrs. M., aged 50, married; mother of quite a large family; daughter of Mrs. T. (Case 3), and sister of F. G. A. (Case 2). Family history good up to the occurrence of the cases here mentioned; previous health good; was much in attendance upon E. T. (Case 1) during his illness in the summer of 1895, and was for some weeks with her brother (Case 2), during the summer of 1897. She also attended her mother (Case 3), during the early part of her illness. On the death of her mother, Mrs. M. moved into the old homestead, and occupied the sleeping-room which had been used by Mr. and Mrs. T. (Cases 1 and 3), also making use of their bedding and other household goods.

In the summer of 1899 she began to suffer distress about

the rectum, and noticed a discharge of mucus and slime, which she for a time attributed to piles. She was placed under my care in October, and I asked Dr. J. F. W. Ross, of Toronto, to see her with me. Cancer of the rectum was found to be so far advanced as to render surgical interference useless. In view, however, of the success which had attended my treatment of her brother, she was anxious that something should be attempted. Therefore, at her own request, I did a preliminary colotomy, and followed this by removal of the lower part of the rectum. The diseased tissue was found to extend beyond the reach of the operation, so that only part of it could be safely removed. The wound did as well as is usual in such cases, and the patient was soon up and around again. Electrolysis and cataphoresis were resorted to, while arsenic was administered internally, but very soon the abdominal glands and liver became involved, and she was advised to return to her home, where she died in June, 1900. Unfortunately, the tumor was not subjected to microscopic examination.

CASE 5.—J. T. M., aged 40; physician; family history good. Irreducible inguinal hernia and undescended testis on the left side. Had suffered one or two attacks of renal colic on the right side. Was my chief assistant in all operations mentioned in Cases 2 and 4 of this paper.

In the spring of 1901 he noticed an enlargement in the region of the left kidney and had several attacks of hematuria, gradually lost weight, and was obliged to quit work in August. The enlargement continued to increase, and an exploratory operation was advised. He therefore went into the hospital at London, where he was kept under observation from September 8th to 27th, when Drs. Wishart and Meek cut down upon the kidney. Very extensive adhesions were found, and upon laying open the pelvis of the kidney a lot of soft tissue somewhat resembling blood clots was removed. Dr. Cullen, of Johns Hopkins Hospital, made a microscopic examination of this, and found it to consist of giant-celled sarcoma. The Dr. was soon after taken to his home, but the wound never entirely healed. The new growth rapidly extended along the sinus to the surface of the back, and became a fungating mass, requiring a great deal of care and attention on the part of his attendants. He died April 6th, 1902.

CASE 6.—Mrs. J. T. M., widow of Dr. J. T. M. (Case 5), aged 30; family history good, previous health good. Was the chief attendant upon her husband during his last illness, and herself looked after the daily dressings of the bleeding.

fungating mass upon his back. A short time before the death of her husband she had a small abscess at the lower margin of the vagina, to which no importance was attached.

In November, 1902, she entered the hospital at Ottawa for a course in training as nurse, and about the 1st of December she noticed a small lump in her groin. She therefore consulted Dr. J. Fenton Argue, to whom I am indebted for notes of her case, which I give largely in his own words. Dr. Argue examined her on December 7th, and found a small tumor about the size of a walnut, freely movable, not tender on pressure, nor was there any reddening about it. It looked very much like a sebaceous cyst. However, on cutting down, it looked more dangerous. The tumor and surrounding tissues were removed as widely as possible, and on microscopic examination it was found to be a sarcoma of the small round celled variety, in which were a few spindle cells. The patient made an uninterrupted recovery, and resumed her nursing duties in about four weeks. Two weeks after this, on examination there was found slight thickening in the line of the cicatrix. She was put to bed and treated with X-rays. In spite of this the mass enlarged, and the only benefit derived from the rays was in the lessening of the pain. Coley's fluid was also used, but no definite results were obtained, and at the end of February, 1903, she was removed to her home, where she died about six weeks later. Thus the whole course of her illness, from the first observable symptom to her death, did not exceed four months.

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## PAIN IN THE UPPER ABDOMINAL ZONE—ITS CAUSES AND DIAGNOSIS.\*

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By the upper abdominal zone, I mean that portion of the abdomen bounded below by a line drawn horizontally through the umbilicus and above by the dome of the diaphragm.

Pain in this region may have its seat in organs, or tissues

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situated without this zone, or in organs or tissues situated within it.

### I. WITHOUT.

1. *Pleurisy*.—The pain of pleurisy may be localized in the hypochondriac or epigastric regions. A careful examination of the chest will serve to recognize the cause of this pain.

2. *Pneumonia*.—In this affection the pain may be felt wholly in the abdomen. The mode of onset of the illness, the temperature, the disturbed pulse, respiration ratio, and the physical signs should enable us to recognize the true nature of the illness.

3. *Gastric Crises of Ataxia*.—One of the early symptoms of locomotor ataxia may be severe pain in the epigastrium, with severe and intractable vomiting. These attacks are often recurrent, sometimes periodical. Examination will reveal one or more of the well-known symptoms of tabes dorsalis, viz., lightning pains in the legs, loss of knee-jerks, Argyll-Robertson pupils, optic neuritis, Romberg's sign, etc.

4. *Caries of the Dorsal Vertebrae*, at a point corresponding to the origin of the intercostal nerves that terminate in the upper abdominal zone, *i.e.*, from the 6th to the 10th. This condition is indicated by continuous and severe pain along the course of these nerves, exaggerated knee-jerks, weakness of the legs, rigidity of the muscles of the back, and tenderness over the affected vertebrae.

5. *Uremia* is occasionally attended with severe pain in the epigastrium. An examination of the urine will reveal the presence of albumen and casts. About three years ago, I saw a woman in the eighth month of pregnancy, who was suddenly seized with excruciating pain in the epigastrium and vomiting. The urine contained albumen in large quantities, epithelial and granular casts. A few days afterwards she was seized with convulsions.

6. *Appendicitis*.—During the early stage of appendicitis, the pain may be referred to the upper abdominal zone. Examination will reveal tenderness over McBurney's point, rigidity of the right rectus muscle, and other symptoms of appendicitis.

### 7. Cardiac Affections:

(a) *Pericarditis*.—The pain of acute pericarditis may be felt only in the epigastrium. On auscultating the precordia, a to-and-fro friction sound may be heard not synchronous with the heart sounds. If there is effusion, the symptoms and signs of this condition may be found if sought for.

(b) *Angina Pectoris*.—While the pain of angina pectoris is usually found in the precordial region radiating to the arm and neck, yet there are cases in which it may be referred almost wholly to the epigastrium. An examination of the heart and arteries, with a careful consideration of the mode of onset of the pain and other symptoms, will serve to reveal the true nature of the pain.

8. *Aneurism of the lower part of the Thoracic Aorta* may so compress and destroy the vertebrae as to produce symptoms similar to those of caries of the vertebrae, with the added symptom of a pulsating tumor in the back.

*Acute Rheumatism*.—Pain in the upper abdomen is frequently associated with rheumatism, especially in children. The pain is of short duration; recurs. The diagnosis will depend on the recognition of other symptoms of rheumatism.

## II. WITHIN.

1. *Localized Subphrenic Peritonitis*.—I wish here to speak only of a suppurative form, which is usually due to the perforation of a gastric or duodenal ulcer.

*Diagnosis*.—A history of gastric ulcer can usually be elicited. The onset is generally sudden, with severe pain and vomiting. Later there are chills, fever, and rapid pulse. The respiration is greatly embarrassed, and there is marked rigidity of the abdominal muscles.

*Physical Examination*.—Dr. Sidney Martin, in Gibson's "Practice of Medicine," says: "Physical examination shows the following points: In many cases the heart's apex-beat is displaced horizontally away from the diseased side. The side is but slightly bulged, and the respiratory movements are deficient. In some cases abdominal respiration ceases, in others it is present. A thrill may be elicited over the abscess in some cases by a sudden jerking movement given to the abdominal wall. The liver may be displaced downwards, even to the level of the umbilicus. Over the lower part of the chest there is a tympanitic note, the upper limit of which is sharply marked off from the resonance obtained over the lung. The liver dulness may be completely absent, a tympanitic note being obtained over it."

"The physical signs of percussion are frequently obscured by the presence of consolidation of the lung, or by fluid in the pleura. Auscultation gives valuable signs. Vesicular breath sounds are heard over the lung down as far as the edge of the

abscess, while over the tympanitic resonance the breath sounds are replaced by amphoric breathing, and over the area of the dulness they are absent. The bell-sound may be obtained."

He might have added that a peritoneal friction rub may be heard below the tip of the 10th costal cartilage.

## 2. Diseases of the Stomach.

(a) *Hyperacidity*.—The repeated occurrence of pain in the region of the stomach or the recurrence of attacks of pain at regular intervals a short time after eating, particularly, if the pain is relieved by eating a little nitrogenous food or taking an alkali, may lead us to suspect hyperchlorhydria. If a test meal be given and the stomach contents be removed two or three hours after and found to consist of a small quantity of fine, well-digested, thin masses of food, containing a great deal of free HCl, the suspicion will be confirmed. We must now decide whether we are dealing with a purely nervous form of the disease, or whether there is an ulcer of the stomach. This will be referred to later.

(b) *Hypersecretion*, or excessive flow of gastric juice, occurs in two forms, viz., intermittent and chronic.

(1) The intermittent form is characterized by the appearance of more or less severe pain in the region of the stomach, usually spasmodic in character. Vomiting occurs, at first consisting of particles of food, later of yellowish green, acid fluid. The attack may last for hours or even days. As soon as the attack ceases the patient feels quite well. After a few weeks or months another attack may occur. Examination of the vomit shows that it contains HCl and pepsin.

(2) Chronic hypersecretion is characterized by pain occurring either during the period of digestion or when the stomach is empty. There is no pain immediately after eating, in fact, pain if present before eating disappears when something is eaten. When the pain first comes on it is slight, but gradually increases in intensity, and finally may become very severe. The pain generally comes on during the night.

The stomach contents should be examined after a period of fasting. To this end the stomach should be thoroughly washed out the evening before, and the patient should not be permitted to take anything during the night. The following morning the stomach contents should be aspirated, and if 100 c.c. or more of fluid is removed without any admixture of food particles, continuous secretion of gastric juice is indicated.

(c) *Gastric Ulcer*.—Pain is the most prominent symptom of this disease, and may be the only one. If the pain is confined

to a circumscribed area of the gastric region, if at the same time there is a painful pressure point at the back one inch to the left of the 10th to the 12th dorsal vertebrae, and if the attacks of pain occur regularly at the height of digestion, there is probably an ulcer of the stomach. If vomiting occurs, it usually does so at the height of the paroxysm of pain, *i.e.*, within two, or at most three, hours after eating, and gives immediate relief to the pain. If, in addition to the pain just described, the examination of the stomach contents reveals the presence of increased HCl, the diagnosis of ulcer is rendered more probable. Severe pain and increased HCl may be present in hyperacidity; however, in ulcer the cardialgic attacks occur more regularly than in hyperacidity. If, in addition to the pain, the vomiting and increased HCl, there is hematemesis, the diagnosis of ulcer of the stomach is almost positive.

(d) *Gastric Cancer*.—The diagnosis of this affection may be very difficult, especially in the early stages. If all the important symptoms, as pain in the epigastrium, vomiting, belching, emaciation, cachexia, tumor, absence of free HCl, and presence of lactic acid, with coffee ground vomit are present, the diagnosis is easy. In other cases it may only be possible to arrive at a diagnosis by keeping the patient under observation for a considerable time, and by making repeated examinations of the stomach contents. Carcinoma may be mistaken for chronic gastritis, severe anemia, or nervous dyspepsia. The following points must be carefully weighed in arriving at a conclusion in a case of gastric disease: The age of the patient; state of nutrition; presence or absence of cachexia; pain, its situation and characters; vomiting, time of its occurrence and its nature; whether or not there is blood in the vomit; the peptic powers of the stomach; its motor power; whether free HCl is repeatedly present or absent; whether free lactic acid is present; whether the Boas-Oppler bacillus is present; and lastly, whether or not a tumor can be palpated in the region of the stomach.

### 3. Diseases of the Liver.

(a) *Abscess of the Liver* is usually attended by pain in the region of the liver over the lower portion of the thorax. The pain may be referred entirely to the abdomen, or may radiate to the scapula. The temperature is usually intermittent or remittent, so that this affection may be mistaken for malaria. The exacerbation is sometimes preceded by a chill or chilly sensation. Sweating follows the exacerbation of temperature, and drenching perspiration may occur independently of the rise of

temperature, especially during sleep. Anorexia is almost always present.

The right lobe is more frequently the seat of abscess than the left, and usually towards its convexity, hence the increase in size is upwards and to the right. When there is upward enlargement of the liver, we get a dome-shaped increase of the hepatic dulness in the axillary or scapular line, whereas in empyema the upper limit of the dulness is more horizontal. Examination of the blood will show increase of the leucocytes and absence of the plasmodium malariae.

(b) *Carcinoma of the Liver* is usually secondary to cancer elsewhere; hence in every suspected case, malignant disease should be looked for in some other part of the body. Pain is not a constant symptom, however it is usually present either in the region of the liver or in the epigastrium or shoulder; emaciation is marked and progressive. Cachexia develops early and advances steadily, dyspeptic symptoms are common. There is a jaundice in about 50 per cent. of the cases. In many cases there is pyrexia.

Physical examination reveals enlargement of the liver, which descends with each inspiration. The surface is usually irregular and nodular. When the growth is diffuse, the liver may be very large and quite smooth. Ascites is frequently associated.

(c) *Hanot's Hypertrophic Cirrhosis of the Liver* is frequently attended by paroxysms of pain in the region of the liver. There is moderate enlargement of the liver, and also of the spleen. The disease may last for years. Jaundice is always slightly present, and undergoes periodic intensification, associated with pain in the upper abdominal zone.

I have had a patient under observation for some years, who has hepatosplenomegaly and slight jaundice, with recurrent attacks of pain in the region of the liver, and nausea and vomiting. Following these painful attacks there is very marked deepening of the jaundice. This case I look upon as one of Hanot's cirrhosis.

#### 9. Diseases of the Gall-bladder and Bile-ducts.

(a) *Cholecystitis*.—This disease is commonly associated with gall-stones, and also occurs as a sequel of typhoid fever. Its onset is usually sudden, with severe paroxysmal pain in the region of the gall-bladder or epigastrum. Rigidity of the upper abdominal wall and tenderness over the gall-bladder are marked. In the more severe cases there are nausea, vomiting, prostration, rapid pulse, and increased temperature. In many

cases a tumor, which is smooth, tense, tender, non-fluctuating, and slightly movable from side to side, may be felt.

(b) *Cancer of the Gall-bladder* is not easily recognized in the early stages. When the portal glands become involved, jaundice and ascites make their appearance. A tumor, which is hard and uneven, may be felt.

(c) *Gall-stones*—So long as gall-stones remain in the gall-bladder, they give rise to no symptoms unless inflammation is superadded as a result of infection. The symptoms are then those of acute cholecystitis.

Acute obstruction of the common duct by a stone is indicated by severe pain in the epigastrum or right hypochondrium, radiating to the back and breast, nausea, vomiting, marked jaundice, fever and chills. As soon as the stone passes from the common duct into the duodenum, or is returned to the cystic duct, the symptoms suddenly subside.

In chronic occlusion of the common duct by a stone, there are no symptoms till infection is added to the obstruction. The following case, which was referred to me by Dr. Hutchinson, of St. Thomas, last October, will illustrate the symptoms of this condition.

Mrs. H., aged 49 years, was ten years ago suddenly seized with severe pain in her right side, which was soon followed by jaundice. At the same time a "lump" appeared at the edge of the ribs on the right. The lump lasted about three weeks, then disappeared, and has never since returned. From the time of this attack, patient has had frequent attacks of epigastric pain, but never severe till two years ago last July. The pain was very severe at this time, and was felt chiefly in the epigastrum and right hypochondrium. Six months after this she had another severe attack, which lasted for about six weeks. Between these severe attacks patient has had "spells" of less severe pain, lasting for a day or two each time. In July, 1903, she had another very severe attack, which lasted for five weeks, and was attended with jaundice. Since this time patient has never been well except for a day or two at a time, and for the ten days before I saw her she suffered almost continually. The pain always comes on quite independently of food, usually in the afternoon or evening, and is very severe, "almost sends the patient wild." Pain so severe that it requires morphia, 1 grain, hypodermically to relieve it. During the severe attacks there is profuse perspiration, and often nausea and vomiting. The pain begins in the epigastrum, then passes to the right hypochondrium, where it is most severe, thence to the right

shoulder, and to a lesser degree to the left shoulder. The skin is very itchy, especially after an attack. There is little or no jaundice; appetite has been poor for months. Stools often, but not always clay-colored. During the acute attacks she has chills, fever and sweats. Patient has emaciated a great deal.

On October 28th Dr. Meek operated on the patient. He found a large calculus in the diverticulum of Vater, which was removed through an incision in the common duct. There were many strong adhesions binding the liver and the gall-bladder to the duodenum and bowels. Gall-bladder was atrophied and divided into two parts by firm adhesions.

#### 11. *Diseases of the Spleen.*

(a) *Movable Spleen*.—In wandering spleen pain of a dragging character may be felt in the epigastrum and left hypochondrium. The recognition of the organ in an abnormal position will suffice for the diagnosis of this condition. Should the organ rotate on its pedicle this will be indicated by severe paroxysmal pain in the left hypochondrium, persistent vomiting and shock. The pulse becomes rapid and feeble.

(b) *Infarct and Abscess of the Spleen* usually follow infective endocarditis and septic conditions, and is indicated by pain and tenderness in the splenic region, on pressure, and swelling of the organ.

(c) *Spleno-Medullary Leukemia* is commonly attended by pain and tenderness in the left hypochondrium. The diagnosis will depend on the presence of enlarged spleen and marked increase of leucocytes.

#### 7. *Diseases of the Pancreas.*

(a) *Acute Pancreatitis*.—Many points in the symptomatology as well as in the etiology of this affection are as yet obscure, which makes its recognition difficult. Its onset is sudden and violent, resembling much an acute intestinal obstruction, or a calculus obstruction of the common duct. Pain is the earliest symptom, and is said to be more intolerable than that of gall-stones. The pain is felt in the epigastrum, and is usually paroxysmal in character. Severe vomiting accompanies the pain, as also do rapid pulse, dyspnea, cyanosis, and hiccough. Localized distension of the epigastrum, resonant upon percussion, is an early sign. The temperature rises in the course of 24 hours, and many range from 100 to 104 deg. F. throughout the disease.

(b) *Chronic Pancreatitis*.—The symptoms are not distinctive. They may be similar to those of gastric catarrh, viz., loss of appetite, nausea, vomiting, belching, pyrexia, and a sense of

epigastric fulness and weight. The enlarged pancreas may press upon the common bile-duct and give rise to jaundice. Glycosuria may be present.

(c) *Pancreatic Cyst* is indicated by the presence of a tumor beginning in the left hypochondrium, between the costal cartilages and the median line, and gradually increasing in size. This tumor is slightly movable, and separated from the liver and spleen by a resonant area. Along with the tumor there are epigastric pain and digestive disturbance, accompanied by loss of flesh and strength.

(d) *Cancer of the Pancreas*.—Osler summarizes the most important features of this disease as follows: (1) Epigastric pains often occurring in paroxysms; (2) jaundice, intense and permanent, and associated with dilatation of the gall-bladder; (3) the presence of a tumor in the epigastrium; (4) symptoms due to loss of function of the pancreas, fatty diarrhea, clay-colored stools, and diabetes; (5) a very rapid wasting and cachexia.

#### 7. Diseases of the Bowel.

(a) *Duodenal Ulcer*.—The symptoms are similar to those of the gastric ulcer.

(b) Impaction of feces in the transverse colon may cause either ulceration of the bowel or a slight localized peritonitis, and thus give rise to pain. A soft, movable, doughy tumor may be felt either above the umbilicus or at either the hepatic or splenic flexure of the colon. A few doses of castor oil will serve to determine the nature of such a tumor.

#### 8. Diseases of the Kidneys.

(a) *Nephroptosis*.—Occasionally movable kidney gives rise to severe abdominal pain, vomiting, chills and fever, and these are known as Dietl's crises. When these symptoms occur the organ may be felt in an abnormal position, and is tender on pressure.

(b) *Nephrolithiasis*.—The diagnostic phenomena are those which attend renal colic. The attack begins with sudden, sharp, paroxysmal pain in the renal region. The pain may radiate along the ureter to the testicle or inner side of the thigh, or it may pass towards the chest and shoulder. Attacks are usually attended with nausea and vomiting, profuse perspiration, and feeble, quick pulse. Micturition is frequent, and the urine usually contains blood.

(c) *Perinephritic Abscess* is attended with dull, aching pain in the lumbar region. At times the pain is intense, and aggravated by pressure. The thigh of the affected side is partially

flexed. Examination will show bulging of the loin, and occasional fluctuation and edema are noticed. There is usually fever of a septic type.

(d) *Tuberculosis of the Kidney*.—Tuberculous kidney may give rise to severe pain in the loin. The symptoms may resemble those of calculus pyelitis. The diagnosis will depend on the history of the illness, on the presence of tubercle elsewhere, and of tubercle bacilli in the urine. Hectic fever and emaciation are usually marked.

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## THE ENLARGEMENT OF THE PROSTATE.

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BY F. W. E. BURNHAM, M.D., WINNIPEG.

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The frequency of prostatic enlargement, occurring as it does in 30 per cent. of men over 50 years of age, would make it seem that it forms a not unusual, if not a necessary, complement of advancing years.

Between those prostaties who suffer some degree of mechanical inconvenience, and those who do not, there are those cases, including frequently some with a very considerable prostatic enlargement, which are only discovered post mortem. It is hardly necessary to remark, then, that though a person may possess an enlarged prostate, this by no means implies that he is either to suffer from it or require assistance.

The analogy, histological and pathological, between the uterus and the prostate is very striking. In 40 per cent. of women who have reached the age of 50, there are found myomata, resembling more or less the normal uterine parenchyma. In 30 per cent. of men who have reached the same age, growths are found resembling the former histologically and in their course, and which are included under the more comprehensive but faulty term of hypertrophy.

In each the effect is mechanical, resulting in the production of hemorrhage in the one, according to its proximity to the uterine mucosa, and in the other of urinary obstruction, more or less complete. Clinically, this analogy is further seen in the proportion of cases which are only discovered post mortem, and were unsuspected during life.

If a large number of enlarged prostates be examined, it will be found that they can be divided into five distinct varieties:

(a) A projecting middle lobe, pedunculated or sessile.

(b) A pedunculated growth springing from a middle lobe. In the formation of the pedunculated variety there is a further resemblance to the uterine fibrous polypi, which were originally interstitial, and finally became pedunculated.

(c) The lateral lobes alone.

(d) A middle lobe, with lateral lobes, forming three distinct projections.

(e) A uniform circular projection surrounding the internal orifice of the urethra, a variety which is commoner than supposed, and which was first described by Sir Benj. Brodie. This latter form, though common clinically, is not seen to advantage in anatomical preparations, in consequence of the loss of support of the base of the bladder on its removal. As a middle lobe, as such, does not normally exist, a growth in this situation, whether pedunculated or sessile, is comparatively rare.

It seems that the commonest condition found is a uniform enlargement of the whole gland, with obliteration of the median notch, in fact, an obliteration of this notch clinically indicates a uniform enlargement of the lateral lobes.

The effect, in a general way, upon the urethra of this enlargement of the prostate is elongation and increase in the normal curvature. If the enlargement affects both lobes, the urethra is flattened laterally; if it is confined to one lobe, the urethra is distorted to the opposite side. The growth encroaches upon and may fill the greater portion of the cavity of the bladder, the capacity being thus diminished. In this instance the frequency of micturition would be directly the result of diminution of capacity rather than to the presence of residual urine. The condition of the bladder depends upon the degree and duration of the obstruction, and the freedom from urinary infection. If under the influence of cold, or some diuretic action distending the bladder, more or less complete retention is established, dilatation of various degrees follows. But in the great majority obstruction comes on slowly, accompanied by hypertrophy of the walls of the bladder, which may contract, and by reducing the capacity, give rise to another cause of frequency of micturition. In the contracted form the mucous membrane is thrown into folds, which frequently become encrusted with phosphatic deposit.

Hypertrophy and separation of the muscular fasciculi result from attempts on the part of the bladder to overcome the obstruc-

tion. Small slits or pits, usually transverse, appear from indentation of the mucous membrane between the separated muscular fasciculi. Each pit, as it enlarges, becoming a saccule, which grows indefinitely, the rate of growth depending upon hydrostatic pressure, and may eventually form a sac larger than that of the bladder itself. These sacculations form almost independent reservoirs for the retention of decomposing urine, favoring the formation of calculi, and the growth of neoplasms. It can readily be seen that the expulsive efforts of the bladder would be directed towards the increase in size of these herniae vesicæ.

This condition of affairs is accompanied by similar dilatation of the upper urinary tract, the effects on the upper urinary tract, as in the bladder, depending upon the degree of obstruction, which is greatest in the pedunculated growths of the so-called middle lobe, acting as a valve or trap-door over the internal urethral orifice.

Let us for a moment consider the mechanism of micturition in these cases. Where there is a so-called pedunculated middle lobe, this is washed forwards, and acting as a valve, effectually prevents any escape. In the collar-like projection surrounding the urethra, the force of the urine striking on the edge of the collar acts as a circular valve, also effectually closing the urethra, so that whether it be a pedunculated growth or a uniform enlargement or otherwise, the valve-like action is always present. In the act of micturition, so long as muscular contraction is maintained nothing escapes, but the minute that relaxation occurs the valve-like action disappears, and the urine dribbles away.

The cause of residual urine, or that which remains after the completion of the act of micturition, has been ascribed to the altered relations existing between the urethral orifice and the most dependent portions of the bladder. From an examination of a great many specimens, I have not satisfied myself that the cause of residual urine in all cases is the formation of a cul-de-sac posterior to the internal urethral orifice.

In some cases, the existence of the post-prostatic pouch is a certainty, but there are other cases with residual urine in considerable amount, in which no such pouch or sacculation is present, and in these cases I rather think that the cause of residual urine is reduced tonus, resulting on the one hand in inability to expel completely the contents, and on the other in the greater tolerance to the presence of a certain amount of residual urine. An analogous condition is found in the ali-

mentary canal, when its walls fail to respond to the accustomed stimulus. There is a failure to expel the contents on one hand, and on the other an increasing tolerance of their presence.

The fact that all prostaties do not suffer from obstruction has been repeatedly demonstrated in the post mortem room, so that when a patient is found with enlarged prostate and with residual urine, it is to be viewed in the light of a broken compensation.

The patient has reached this point in his career with possibly little inconvenience, but the obstruction and residual urine are increasing apace. It is in this stage when the general condition is good—the upper urinary tract normal—when the bladder has not yet sustained much of that damage which comes later—when the urine is not infected—that a large number of cases present themselves for advice. Should surgical treatment be advised, or should he be introduced to what is popularly known as catheter life, with all its annoyances and dangers? There is here a grave responsibility, a responsibility which is not generally appreciated, because the danger is not immediate.

I am quite satisfied that the dangers of a few ounces of residual urine are nothing as compared with that of persistent catheterism, as it is performed by the majority of patients, who cannot by any amount of instruction be taught the necessity of cleanliness in its performance. Follow the history of anyone living a catheter life, and there will always be found a time when, either from sepsis or instrumental intolerance, that the treatment completely breaks down. The cause of this is easily explained. The healthy mucous membrane of the bladder is resistent to the action of a considerable quantity of pathogenic micro-organisms. This power of resistance, quite naturally, with the assistance of local conditions, diminishes with advancing years, so that a quantity of micro-organisms, which would, say at the age of 50, produce no effect whatever, would, because of the before-mentioned reduced power of resistance, cause at the age of say 70 a violent cystitis. Occasionally, it is true, a case is reported in whom a catheter was successfully used during a long term of years, but for every such case can be shown hundreds who have died from surgical kidney.

This temporizing treatment of a removable surgical affection, fraught with a certain and disastrous break-down, is unscientific, and, in my opinion, has not been sufficiently condemned.

It is noticed, then, that the health of those who rely on the catheter, slowly, but steadily, deteriorates, and that the orthodox treatment of enlarged prostate at some time, from some cause

or other, breaks down. We will now consider the principal surgical procedures which have been devised to overcome the difficulty.

White, having in view the atrophy of the uterus after removal of the ovaries, performed experiments on the lower animals, to determine the influence upon the prostate of the removal of the testicles, and, as a result of this investigation, concluded that a very considerable atrophy followed such a procedure. After the publication of these results, accompanied by some cases in the human subject, reported also by the same author, castration and section of the vasa deferentia were very extensively performed, with very encouraging results. The immediate relief which was described by some operators as occurring in these procedures, is pathologically impossible, and, therefore, clinically highly improbable. It is interesting to note that this indirect treatment, which was reported by so many observers as being so successful but a few years ago, is now discarded, and only remains as a matter of history. The direct treatment has been more successful than the indirect.

Bottini attacked the growth through the urethra by means of a very ingenious galvano-cautery which he devised. The treatment was based on faulty pathology—upon the assumption that there was a bar at the commencement of the urethra, the division of which would remove the difficulty. In the hands of the originator and his followers the use of the instrument has been attended by no inconsiderable success, limited to about 30 per cent. of the cases, those in which there is a collar like projection surrounding the urethra. It is unfortunate that this simple treatment has not a wider range of application.

In the radical removal of the growth, which is the only rational treatment, Albarran, of Paris, selected the perineal route. This method was adopted by Guyon and Socin, and is still preferred by the French operators. The most potent objection to this route is that it fails in 30 per cent. of the cases; it requires more time in its performance; is accompanied by greater hemorrhage from the prostatic venous plexus, and consequently is followed by greater shock in a class of patients who are not able to withstand any great degree of shock.

It would seem from the situation of the gland, that the perineal route would be the proper one by which to remove it. This expectation has not been fulfilled, and it is inadvisable to select a method which promises failures in 30 per cent. at the outset.

The performance of a suprapubic cystotomy by McGill, of

Leeds, in 1899, followed by removal of the enlarged prostate, marked the greatest advance made in genito-urinary surgery since the first removal of a vesical calculus. It was one of those epoch-making discoveries, which come from time to time to reward the labors of the patient investigator. Rarely has an operative procedure, after a lapse of years and a fuller investigation, stood as originally performed in all its entirety. McGill's technique was so complete that it has substantially not since been modified. We have in this a safe method applicable to all cases, one which permits thorough exploration of the bladder, and provides efficient drainage.

Let us consider the failures of the various procedures. In catheterism there are failures, amounting to 100 per cent., no less certain because deferred. With Bottini's method in the hands of the originator, cures followed in 32 per cent. of the cases. It is needless to say that the galvano-caustic treatment in the hands of one less enthusiastic, does not meet with that measure of success which was hoped for it by the originator of the galvano-cautery. The perineal route is applicable to 70 per cent. of the cases, whereas the suprapubic method is applicable to all cases. It permits of the radical removal of the cause of the obstruction, affords opportunity for thorough examination, and is followed by efficient drainage.

Too much cannot be said in condemnation of the temporizing treatment of this affection, accompanied, as it certainly is, by increasing difficulty of catheterism, and by those serious pathological conditions of the bladder and upper urinary tract, the result of obstruction on the one hand and of infection on the other, and that determine the prognosis rather than the size of the prostate, or the duration of the enlargement.

The early radical treatment of prostatic enlargement, based as it is upon sound pathological principles, will increase the expectation of life of the subjects of this most deplorable contingency of advancing years who are, in following the temporizing treatment, beset with all the annoyances and dangers incident to catheter life.

**MUSKOKA FREE HOSPITAL FOR CONSUMPTIVES.**

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BY C. D. PARFITT, M.D., M.R.C.S., L.R.C.P.

Physician-in-Charge Gravenhurst Free Hospital for Consumptives.

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*Mr. President and Gentlemen.*—Since the Free Hospital for Consumptives at Gravenhurst was opened two years ago last April, no communication regarding the work done there has been made to the profession of the province, save through the yearly reports of the National Sanatorium Association, which are sent to all medical men. It is my purpose, in the few minutes I have to-day, to tell you something of what we are trying to do, and how we are trying to do it, and perhaps give you a better understanding of how we can be of use to your patients, and how you can best help us.

The more conspicuous aim of this institution is the cure of tuberculous patients; but its founders had also in mind the dissemination of information about the prevention and treatment of the disease. As our work has developed thus far, this latter missionary purpose has been perhaps better fulfilled than the former more evident aim, both because of the class of cases received and because of the short time they have been kept. Comparatively few really suitable sanatorium cases presented themselves, while there were very many patients in advanced and far advanced stages of the disease who greatly needed the care and training of the hospital, and were admitted, in some cases only to die, in many cases to improve in health, and in all cases to spare to the community the lives of households endangered by the presence of the ignorant consumptive. Of 169 cases of patients remaining in the hospital one month or more, only 30 cases, or 18 per cent., were in the incipient stage; 91 cases, or 54 per cent., had advanced disease; and 48, or 29 per cent., were far advanced cases. I may say here that in our various statistics we exclude cases remaining less than one month, since no material benefit can be gained in so short a time. Of the 35 cases we have had for such short periods during these two years, several have died, and others have left or have been discharged for some personal reason. We have also omitted in our tabulations re-admissions (4 in all), and 8 cases of doubtful evidence of disease. In asking your consideration

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\*Read at the Meeting of the Ontario Medical Association, June, 1904.

of the results shown by figures, I must explain that three different physicians have contributed to them, and it is impossible to make an arbitrary classification. We have followed Dr. Trudeau's terminology and definition. In all, 261 cases had been admitted up to the close of our second year, on April 21st, and 216 of these had been discharged and are to be reported on. Excluding 47 cases, as I have explained, the remaining 169 were classified on discharge as follows: 34 cases (20 per cent) disease arrested; 57 cases (34 per cent.) much improved; and 78 cases (47 per cent.) unimproved. By our terminology, the phrase "apparently cured" should be used only of patients who have been entirely free from the rational signs of phthisis for at least three months. It is impossible for us at present to keep cases long enough to be warranted in using such a term, so our class of "arrested" cases includes several who, in all probability, are actually "cures" according to a proper understanding of that word.

If you compare our classification on discharge with that on admission, you will see that some advanced cases have done very well, considering that the average length of stay for all the cases reported on was only 163 days—some five months—whereas many incipient cases even require as much as nine months to come to the stage of arrest. The hospital has as yet been open for too short a time for me to be able to say anything in regard to the permanency of the results obtained, but we have received many very encouraging letters from patients who keep well and who are at work again, either at their former occupation or at some new one better suited to them, and also from other patients who are faithfully and successfully carrying out at home the hygienic principles learned at the hospital. They all spread abroad the encouragement and teaching of the institution for the benefit of the many other consumptives who are their friends, neighbors or relatives.

The institution is intended for the poor of the Dominion. Naturally, the large majority of our cases, especially in the first year, before the place became known, have been from the Province of Ontario. Twenty have come from other provinces, including Newfoundland, Nova Scotia, and the North-West Territories. One reason why this number is so small is that applications for patients who have very long journeys to make are passed upon with special strictness, both because of the risk and the possible fruitless expense. In all cases the proportion of city dwellers to country people has been two to one.

Considerable misunderstanding exists in the minds of both

## I.

169 cases remaining over 1 month.

Condition on Admission.	Condition on Discharge.			
	Arrested.	Improved.	Unimproved.	Total.
Incipient .....	18 = 60 per cent.	9 = 30 per cent.	3 = 10 per cent.	30 = 18 percent.
Advanced.....	15 = 16 "	35 = 38 "	41 - 45 "	91 - 54 "
Far Advanced .....	1 = 2 "	13 - 28 "	34 - 70 "	48 - 29 "
	34 = 20 per cent.	57 = 34 per cent.	78 = 47 per cent.	169

Average duration of symptoms of disease prior to admission 12 months.

Average duration of stay 163 days.

141 patients made an average gain of 11 pounds.

18 patients had an average loss of 4 pounds.

10 patients were not weighed.

## II.

49 cases remaining from 1 to 3 months.

Condition on Admission.	Condition on Discharge.							
	Arrested.		Improved.		Unimproved.		Total.	
	1st Year	2nd Year	1st Year	2nd Year	1st Year	2nd Year	1st Year	2nd Year
Incipient.....	1	3	1	2	2	.	4	5
Advanced.....	1	1	6	2	4	7	11	10
Far Advanced .....	..	..	..	1	9	9	9	10
	2	4	7	5	15	16	24	25

## III.

120 cases remaining over 3 months.

Condition on Admission.	Condition on Discharge.							
	Arrested.		Improved.		Unimproved.		Total.	
	1st Year	2nd Year	1st Year	2nd Year	1st Year	2nd Year	1st Year	2nd Year
Incipient.....	3	11	5	1	1	..	9	12
Advanced.....	6	7	15	12	15	15	36	34
Far Advanced .....	..	1	4	8	3	13	7	22
	9	19	24	21	19	28	52	68

public and profession in regard to our name—*Free Hospital*. The hospital is absolutely free to those who are actually in need of a place to go to, at no cost to themselves; but those who can afford to contribute something are expected to do so; 157 patients have been maintained at no cost whatever to themselves or their families; 93 of these have been partly maintained by the cities of Toronto and Hamilton at the rate that they allow the general hospitals—40 cents per day; 176 patients have in part maintained themselves or have been paid for by families or friends. Apparent discrepancies in my numbers are explained by the fact that a patient may contribute something to his own support for a time, and later, when no longer able to do this, be put on the free list. The cost of maintenance averages a little over \$6.00 per week per patient. No fees are exacted of anyone, but since the public must bear the burden of the support of the institution, inquiries are made in order to avoid imposition on the part of those who are able to help themselves somewhat.

The life at the hospital is generally a very happy one. Most of the patients look very well, and feel well, as tuberculous patients so often do. Hours are, of course, carefully regulated for rising and retiring; the patient's rest and exercise are individually prescribed and enforced; he is trained in the observation of the effect of exercise upon his temperature; his meals are watched by a trained nurse, and loss of appetite or any other irregularity is reported to the physician. The patient is thus always under close supervision. He may have daily attention from the physician, if necessary, and he is, of course, examined frequently enough for his case to be followed closely. In the large wards and the roofed tents the patients have fresh air always, and in them and on a well sheltered verandah, where there are reclining chairs, with plenty of blankets and cushions, he may live the open air life when it is necessary for him to take prolonged rest, or the weather is too inclement for the natural Muskoka life in the woods or on the water. Boating, a rifle range, a billiard table, a piano with automatic piano-player attachment, and various games, supply a sufficient amount of diversion. The table is, of course, an important matter for the tuberculous invalid, and our food is of excellent quality. I wish that our funds would admit more variety, but fruits and vegetables, for example, are hard to get at most seasons. Bread, butter, meat, milk, and eggs, are all good and abundant. The best proof of this is in the average gain in weight of our patients.

141 patients made an average gain of 11 pounds; 18 lost weight, an average of 4 pounds; and 10 were not weighed.

The medical equipment is complete in essentials. There is a good dispensary, a well-equipped room for the local treatment of disorders of the air passages, and a good clinical laboratory. The medical staff consists of two physicians, a nurse, and an assistant nurse.

The number of patients in the institution is now 50. A few months after the hospital was first opened, the press of patients for admission was so great that our accommodation was enlarged, and for a time we cared for 75; but the funds forthcoming were not enough to support so many, and a year ago our numbers were reduced to 50. It accordingly became necessary to establish a time limit for the stay of each patient, since the waiting list is always considerable, and this was fixed at first at six months and later reduced to only four months. This is a great misfortune, for, curable as tuberculosis is in the earlier stages, it is, nevertheless, as we have said, a long process, and it is hard to know that the good obtained from a half year spent in sanitarium in Muskoka may possibly be quickly lost by too early a return to work. It is the hope of all who are intimately acquainted with our work that we may soon be enabled to increase our numbers again, and also to lengthen the stay of the patients. With a view to the latter need, we are trying to find occupation for patients at the hospital after their time limit has expired. At all times patients who are physically able to do light work of some kind, are required to do small services for the hospital, and it would be to their advantage if there were more ways of using them. A limited number of patients are now kept on at the hospital after their time is up, and four hours of service per day are required in lieu of their board. A poultry yard has been started to help make room for these patients, while furnishing the hospital with fresh eggs and fowls economically. At some sanatoria in the States the institutions are at least half manned by graduate patients, and work is found for them in truck gardens, etc. This will be possible at Gravenhurst when we can get the money, and can keep our patients long enough to make them really well.

These problems, however, have comparatively little interest for you. But methods of admission and a discussion of our class of cases are important matters for consideration here. Our present method of admission leads to a lack of uniformity in our class of cases. Various examining physicians have been appointed in different centres, and their recommendations are

usually accepted without question. Other physicians than these official examiners fill out examination forms, which are referred to the physician-in-charge at the hospital to accept or reject. These filled-out forms often are lacking in necessary data, and sometimes misrepresent cases.

Another thing which helps to make our class of cases unsatisfactory is the fact that from the wage-earning classes we cannot hope to get cases as early as from more prosperous classes, and their disease is often advanced when they present themselves for treatment.

For this hospital to do the work that it is best fitted to do, viz., cure patients who have fair chances for recovery if placed under proper conditions, a much better selection of cases is necessary. The worst class of cases will be cared for in hospitals especially provided for that purpose. I am glad to say that our class of cases is already gradually improving, and that the patient with only a few days or weeks of life before him comes to us much less frequently now than formerly. But I feel that with the scope of the institution better understood by physicians at large, immediate improvement can be secured, and I therefore earnestly beg your co-operation, and ask your attention to a brief general statement in regard to cases suitable for admission.

Cases in whom disease has existed but a short time and who are not running an acutely febrile course, are nearly always acceptable. Those of good vitality, in whom disease has existed for some months, even though the lungs have been considerably involved, unless some serious complication exists, such as diarrhea or extensive laryngeal involvement, or unless the daily maximum temperature is over 100.5 deg., will usually do very well, indeed. However, in several cases where there were laryngeal infiltrations, both with and without ulcerations, the combination of sanatorium life with daily local treatment has given the most satisfactory results. These cases are generally refused at sanatoria, but I believe that when the local laryngeal disease is limited and the general condition good, they stand a very fair chance. Cases who run a temperature above 100.5 deg. should be kept at rest at home for a considerable time, until the active febrile signs have been reduced, when they may prove to be suitable candidates for admission. Since the hospital is for the treatment of incipient tuberculosis, we have not the necessary help at hand to undertake the care of patients in the acute stage of the disease. Casual illnesses often

make the nursing of twelve or fifteen patients necessary for varying, and sometimes prolonged, periods. With the routine of supervision added, the nursing staff has its hands full. A judgment founded upon the careful consideration of the general constitutional state of the patient and the temperature record for a number of consecutive days, would, quite apart from the question of the amount of local disease, help to exclude many of the undesirable cases who press for admission.

A number of physicians have visited the hospital from time to time, and we are very glad to show them all we can of our work there. I wish that more of you could come. It would put you more thoroughly in touch with our purposes and problems than any paper can hope to do.

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A large clinical experience with migraineous patients (George M. Gould, in *J.A.M.A.*) shows that their headaches are of an apparently amazing variety of kinds, and seemingly of causes. An examination of the literature also illustrates the same fact, each of these kinds by one or by others being called or described as migraineous. The mere index or enumeration of these kind of headaches would fill many pages. In the first place, there is a long list of headaches, plainly due to organic and systemic diseases, such as tumor and traumatism of the brain, meningitis, fevers, infectious diseases, etc. These are, of course, excluded. They are few in numbers compared with the non-symptomatic and functional cases, but in many treatises they fill most, if not all, of the field of vision. Of the functional kind, one may likewise construct a huge list : The nervous, sick, periodic, hereditary, constitutional, dietary, hemicranic, menstrual, ocular, nasal, dental, constipational, bilious, indigestional; those from intellectual overwork, physical exhaustion, worry, lack of food, from study, bad light, bad ventilation; from coryza, influenza, rheumatism, uterine disease, pregnancy, hysteria, anemia, diseases of the spinal cord, syphilis, and so on and so on. And, finally, there is a very large class which cannot be ascribed even to the vaguest and most far-off cause. Any one, two, or dozen of the kinds may be mixed in all proportions in any one case, and only omniscience—not possessed, at least, by young practitioners—could discern the explanation and dissolve the mystery. Lastly, the location, character, and degree of the ache in, about, on and below the head, in spots, in halves, or of the whole, make confusion worse confounded.

## The Physician's Library

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P. BLAKISTON'S, SON & CO. sold during last year 15,487 copies of Gould's Medical Dictionaries, making the total sales to date 166,083.

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In printing all the copies of "Deaver's Surgical Anatomy" so far demanded by its most successful sale, there will have been used 2,340 pounds of ink, 188,002 pounds or 84 tons of paper, and the printing press will have made 3,455,000 impressions. On and after July 1st, 1904, the price of this work will be advanced to \$30.00 in half morocco, and \$33.00 in half Russia binding.—P. Blakiston's Son & Co., Publishers, Philadelphia.

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*The Gazette Pocket Speller and Definer, English and Medical.*  
Second Edition. New York: The Gazette Publishing Co.

This handy little volume is intended primarily as a speller; but in revising it for the second edition, the aim has been to enlarge its usefulness without increasing its dimensions. The words are defined briefly, being mainly synonyms. The work is the production of The Gazette Publishing Co., publishers of *The Dietetic and Hygienic Gazette*, one of our most valued exchanges.

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*Epilepsy and Its Treatment.* By WILLIAM P. SPRATLING, M.D., Superintendent of the Craig Colony for Epileptics at Sonyea, N.Y. Handsome octavo volume of 522 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company. 1904. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$4.00 net.

This work by Dr. Spratling is of unusual interest for many reasons: It is the first complete treatise on epilepsy since the appearance of Echeverria's work, published over thirty-three years ago, and represents the practical experience of Dr. Spratling as Superintendent of the Craig Colony for Epileptics at Sonyea, N.Y., during a period of ten years. The great progress

made in the knowledge of epilepsy and its treatment during the past fifteen years certainly demanded an accurate and careful work which would include these latest advancements. Dr. Spratling has given us all that could be desired. Of particular interest are the chapters on the psychologic and medico-legal aspects. An entire section is devoted to the all-important seizure type—*Status Epilepticus*; and treatment, general, educational, medical and surgical, is discussed with wisdom, thought and conservatism. The subject is bountifully illuminated by the citation of illustrative cases; and, indeed, for the entire work we have nothing but praise. General practitioners, as well as those especially interested in epilepsy, will find the book of great value.

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*Diseases of the Intestines and Peritoneum.* By DR. HERMANN NOTHNAGEL, of Vienna. The entire volume edited, with additions, by HUMPHREY D. ROLLESTON, M.D., F.R.C.P., Physician to St. George's Hospital, London, England. Octavo volume of 1,032 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company. 1904. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$5.00 net; half morocco, \$6.00 net.

This new volume in Saunders' American edition of Nothnagel's practice is the eighth to be issued, and appearing within two months after the publication of the volume on tuberculosis, gives evidence that the publishers intend completing the series at an early date. This, one of the most valuable volumes in the series, is by the famous clinician, Dr. Hermann Nothnagel himself, and is as exhaustive as it is practical. The distinguished editor, Dr. Humphrey D. Rolleston, of London, Eng., has used his pen most profusely, almost every page giving generous evidence of his careful editing. The editorial additions include sections on intestinal sand, sprue, ulcerative colitis and idiopathic dilatation of the colon. Appendicitis and peritonitis have been given unusual space, treatment and diagnosis receiving exhaustive consideration. The section on intussusception has been greatly enlarged by the invaluable additions of D'Arcy Power, of England, who has made this subject his own. There are twenty inserts of great merit.

*International Clinics.* Volume II. Fourteenth Series. 1904.  
Philadelphia: J. B. Lippincott Company.

Among the contributors to this volume we notice the name of Dr. John McCrae, of Montreal. Dr. McCrae writes on the recent progress in Tropical Medicine. There are other excellent articles on Diseases of Warm Climates, Treatment, Medicine, Surgery, Pediatrics, and Rhinology. There are a goodly number of illustrations throughout the text. As a means of keeping one abreast of the advances in the domain of medicine, "International Clinics" certainly fills the bill.

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*Diseases of the Nose and Throat.* By D. BRADEN KYLE, M.D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia; Consulting Laryngologist, Rhinologist and Otologist, St. Agnes' Hospital. Third edition, thoroughly revised and enlarged. Octavo volume of 660 pages, with 175 illustrations, and six chromo-lithographic plates. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Toronto: J. A. Carveth & Co., Limited, 434 Yonge Street. Cloth, \$4.00 net; sheep or half-morocco, \$5.00 net.

In presenting to the profession the third edition of this work the general plan of the previous editions has not been materially altered. The entire book has been carefully revised and such additions have been made as were rendered necessary by recent medical progress. The most important alterations and additions have been made in the chapters on Keratosis, Epidemic Influenza, Gersuny's Paraffine Method for the correction of Nasal Deformities, and in the one on the X-Rays in the treatment of Carcinoma. The etiology and treatment of Hay Fever have been partially re-written and much enlarged, as has also the operative treatment of Deformities of the Nasal Septum. In the chapter devoted to general considerations of Mucous Membranes and Hay Fever the author records the results of his experience in the chemistry of the saliva and nasal secretions in relation to diagnosis and treatment. The literature has been carefully reviewed, and a number of new illustrations added, thus bringing the work absolutely down to date.

*Obstetric and Gynecologic Nursing.* By EDWARD P. DAVIS, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College and in the Philadelphia Polyclinic. 12mo volume of 402 pages, fully illustrated. Second edition, thoroughly revised. Philadelphia, New York, London: W. B. Saunders & Company. 1904. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Polished buckram, \$1.75 net.

The usefulness of this book to the nursing profession is manifest by the fact that a second edition has been called for. It is necessary for an obstetric nurse to possess some knowledge of natural pregnancy and of its consequent diseases; and as gynecologic nursing is really a branch of surgical nursing, special training and instruction are required to meet the conditions arising. This book just fills the need, everything that the obstetric and gynecologic nurse should know being included. The second edition shows evidence of having been carefully revised throughout, and considerable new matter has been added. It would be well if every trained nurse possessed a copy of this book, for it certainly is of inestimable value.

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*The Mother's Manual.* A Month by Month Guide for Young Mothers. By EMELYN LINCOLN COOLIDGE, M.D., Visiting Physician of the Out-Patient Department of the Babies' Hospital, New York; formerly House Physician of the Babies' Hospital, New York; Physician-in-charge of the Babies' Clinic of the Society of the Lying-in Hospital of the City of New York. Illustrated. New York: A. S. Barnes & Company.

We have examined carefully the 253 pages of this little volume. It is designed to be placed in the hands of young, unexperienced mothers, and as a consequence we cannot very well see why the author employs medical terms. There are instructions to use bismuth subnitrate, Liquid Peptonoids, "Lassar's" Paste, and a host of well-known proprietary foods. Our own opinion is that it would be better were all these names left out, and that plain hints be given, minus those terms which smack of a knowledge of which the young mother is best left in ignorance. Apart from this the book might serve some good purpose.

*Diseases of Metabolism and Nutrition.* By PROF. DR. CARL VON NOORDEN, Physician-in-Charge to the City Hospital, Frankfort. Authorized American edition; translated under the direction of BROADMAN REED, M.D., Professor of Diseases of the Gastro-Intestinal Tract, Hygiene and Climatology, Department of Medicine, Temple College: Physician to the Samaritan Hospital, Philadelphia. Part V., Concerning the Effects of Saline Waters (Kissingen, Homburg) on Metabolism. By Prof. Carl von Noorden, Frankfort, and Dr. Carl Dapper, Bad Kissingen. New York: E. B. Treat & Co.

As announced in the author's preface, this publication is the second edition of a thesis, published eight years ago, by Dr. Carl Drapper, from the clinic of Prof. von Noorden. It confirms the original observations. Prof. von Noorden authoritatively decides those mooted questions concerning the influence of the sodium chloride waters on digestion as well as in gout, diabetes and other diseases of nutrition. He thus places the medical profession under obligation to him. The exact and scientific manner in which these observations are herein set forth is the striking feature of the book.

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*Manual of Medicine.* By THOMAS KIRKPATRICK MONRO, M.A., M.D., Fellow of and Examiner to the Faculty of Physicians and Surgeons, Glasgow: Physician to Glasgow Royal Infirmary, and Professor of Medicine in St. Mungo's College: Formerly Examiner in the University of Glasgow, and Pathologist to the Victoria Infirmary. Canadian Agents: Chandler & Massey Limited, Toronto, Ont.

The above is the title of a very handsomely bound little book, very kindly handed to us by Messrs. Chandler & Massey, who have shown their customary enterprise and good judgment in securing the selling rights for Canada of such a valuable work as Monro's Manual of Medicine, which covers practically the whole ground taken up by many of the larger and more voluminous works of prominent authors on the same subject. This volume specially recommends itself to the busy practitioner, as well as being an excellent assistant to the medical student on

account of the clear, concise, and, yet thoroughly scientific manner in which this work has been produced, being exceedingly practical, and in every way up-to-date. It will be found a very valuable work of reference, both in regard to diagnosis and subsequent treatment. Treatment, as a matter of fact, occupies a very important part, it being the object of the author to point out the indications through which the cause of each and every trouble can be reached, so as to effect a cure when possible. This volume bears particularly on the practical side of professional work, and its careful examination satisfies us that it will be found a very valuable addition to the text-books in this department.

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*Tuberculosis and Acute General Miliary Tuberculosis.* By DR. G. CORNET, of Berlin. Edited, with additions, by WALTER B. JAMES, M.D., Professor of the Practice of Medicine in the College of Physicians and Surgeons (Columbia University), New York. Handsome octavo volume of 806 pages. Philadelphia, New York, London: W. B. Saunders & Company. 1904. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$5.00 net; half morocco, \$6.00 net.

This is the seventh volume to be issued in Saunders' American Edition of Nothnagel's Practice, and the remaining four volumes are in active preparation for early publication. The American edition of Professor Cornet's exhaustive work appears at a time when the subject of tuberculosis has a peculiar claim upon the attention of mankind. Within a few years both professional and general public interest in the disease has taken enormous strides. In almost every civilized community societies for the prevention of tuberculosis are being organized, and these are composed, not only of physicians, but of laymen, while governments themselves are taking an active part in the movement. Under these circumstances, and at this time, the work is of interest to practitioners, for there is no other treatise which gives an equally clear and comprehensive view of this subject. The article on Acute General Miliary Tuberculosis has been admirably written and gives a thoroughly clear understanding of this disease. The importance of the chemistry of the tubercle bacil-

Ius and its bearing upon immunity have warranted a thorough treatment of this subject. The work is complete and logically arranged, and the editor has made additions where necessary to bring it down to date.

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*Materia Medica for Nursing.* By EMILY A. M. STONEY, Superintendent of the Training School for Nurses in the Carney Hospital, South Boston, Mass. Beautiful 12mo volume of 300 pages. Second Edition, thoroughly revised. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Toronto: J. A. Carveth & Co., Limited, 434 Yonge Street. Cloth, \$1.50 net.

This little work on *Materia Medica* has proved of great value to the nursing profession, evidenced by the demand for a second edition. The statements are not only clear and definite, but the information given can be relied upon as being accurate. In making the revision for this new second edition, the entire text shows evidence of having been gone over with the greatest care. All the new drugs which have been shown to be of actual therapeutic value have been included, their preparations, uses, and doses being clearly and fully described. A valuable feature of the work is the Appendix, containing such practical matter as Poison-Emergencies, Dose-Lists, Weights and Measures, etc., as well as a Glossary of the terms used in *materia medica*. There is no doubt in our minds but that this little work is the best of its kind.

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*International Clinics.* A Quarterly of Illustrated Clinical Lectures, and especially prepared original articles. Edited by A. O. J. KELLY, A.M., M.D., Philadelphia. Volume I. Fourteenth series. Philadelphia: J. B. Lippincott & Co. Canadian Agents: Mr. Charles Roberts, 1524 Ontario Street, Montreal. 1904.

*International Clinics*, a quarterly production of the medical department of the Lippincott Press, is certainly now most favorably known to the Canadian medical profession. It is an authority upon up-to-date treatment, medicine, surgery, neurology,

pediatrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners of medicine. Leading members of the profession the world over have contributed to its volumes as they are regularly issued; and when the editor has such co-laborers as Osler, Musser, Stewart, Murphy, McPhedran, Rotch, Clark, Walsh, Ballantyne, Harold, Landolt, and Kretz, they cannot fail but keep the production in the very front rank. The present volume deals with the progress of medicine in 1903, a most valuable department, compact, concise. The other departments are devoted to treatment, medicine, surgery, gynecology and neurology. A work of such recognized worth should be found in the library of all. Canadian practitioners can order it through Mr. Charles Roberts, 1524 Ontario Street, Montreal.

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*A Text-Book of Mechano-Therapy* (Massage and Medical Gymnastics). For Medical Students, Trained Nurses and Medical Gymnasts. By ALEX. V. GRAFTSTROM, B.Sc., M.D., Attending Physician to the Gustavus Adolphus Orphanage, Jamestown, N.Y. Second edition, revised, enlarged, and entirely reset; 12mo of 200 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Toronto: J. A. Carveth & Co., Limited, 434 Yonge Street. Cloth, \$1.25 net.

The second edition of this useful little work has been entirely rewritten, reset, and very much enlarged. Two chapters have been added—one on Massage of the Eye, Ear, Nose, and Throat, and the other on Pelvic Massage. Seventeen new illustrations have also been added. The author states that his object has been to present a work that would be useful as a text book to students, trained nurses, and medical gymnasts, and as a reference book for the general practitioner, and in our opinion he has fully accomplished his purpose. It is certainly a practical and clear consideration of the subjects of massage and medical gymnastics, and it is with pleasure that we recommend it to our readers. The mechanical get-up is all that could be desired.

*Progressive Medicine.* Vol. II., 1904. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by H. R. M. LANDIS, M.D., Assistant Physician to the Out-Door Department of the Jefferson Medical College Hospital. Philadelphia and New York: Lea Brothers & Co. Price, \$6 per annum.

The small outlay of \$6 per annum to keep one abreast of modern medicine and surgery, should be readily expended in this direction, as *Progressive Medicine* is now in its sixth volume and is recognized as one of the leading productions before the medical profession to-day. The present volume has for its contributors John G. Clark, William B. Coley, Edward Jackson and Alfred Stengel. The reputations of these well-known authors insures the profession that whatever is contained herein is handled in an authoritative manner. It treats of Surgery of the Abdomen, including Hernia; Gynecology, Diseases of the Blood; Diathetic and Metabolic Diseases; Diseases of the Spleen; Thyroid Gland; Lymphatic System; Ophthalmology.

# Dominion Medical Monthly

And Ontario Medical Journal

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VOL. XXIII.

TORONTO, SEPTEMBER, 1904.

No. 3.

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## THE VANCOUVER MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

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That Vancouver, nearly three thousand miles away from the leading medical centres, could muster over 200 in actual attendance, the third largest meeting in the history of the organization, surely proves that the national medical organization was never so popular with the Canadian medical profession than at the present day. There was not a single province that was not represented, and the only regret expressed, if we leave out getting down on the programme and never appearing, was the decidedly slim attendance from Toronto. Indeed, the Vancouver profession, as well as the entire West, censured Toronto very severely for its lack of interest and attendance. It is to be regretted that so many form good intentions and send in their names early for a place on the programme, and never appear to read their papers. It has become so flagrant of late years that many notice and remark upon it, and something will assuredly have to be done in future to provide for an intact programme.

As the Secretary suggests, it is more and more becoming imperatively important that reorganization take place, and that right away. The Association is too worthy an organization to go drifting along year after year, whose prime reason for existence is the reading and hearing read of scientific papers. There are vital questions of medical polities, always to the front, which need the strong support and guidance of the most important of medical bodies in the country, which can best be given by a properly organized body. The constitution and by-laws need shaking up; they need to be regenerated, modernized, made workable. Through the Canadian Medical Association the Canadian profession have the means in their hands of making a strong, forceful and powerful organization. The matter requires the most careful consideration, and especially so as there was a notice of motion to amend the constitution presented at Vancouver.

We wish to congratulate our friends in the Maritime Provinces at their splendid showing, fully a dozen being present. Prince Edward Island, with a medical population of 90, sent 3. Toronto, with a medical population of 450, sent 4. Next year we meet in the extreme east, at Halifax, when no doubt Toronto will endeavor to make amends for this year's poor showing.

To next year's Executive Council and Programme Committee we would respectfully suggest the advisability of an entire afternoon or evening session for the full and free discussion of all matters of a general nature which come up annually, so that important questions of medical polities will not be hurried along off the table without proper consideration.

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### OSLER.

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All Canadian medicine takes pride in the distinctions conferred upon that brilliant son of Canada, Dr. William Osler. When Dr. Tunstall, the President of the Canadian Medical Asso-

ciation, sitting in the same chair, at Vancouver, which Dr. Osler had formerly occupied—the proudest position in the gift of the Canadian profession—read out the following telegram from Dr. Wolfred Nelson, New York, there were round after round of applause, and hearty cheers for Osler: "Thanks for kind invitation. I greatly regret cannot attend meeting. The press here, medical and lay, refers triumphantly to Osler's appointment as Regius Professor of Medicine at Oxford. King Edward approved it. Osler has accepted for next year. God bless dear old Canada, McGill and Osler." Whatever other honors fate may hold in her hand for Dr. Osler, none, we feel satisfied, will be treasured more truly than the thought that for long he has enjoyed the confidence, love and esteem of the medical men of the land of his birth. And how truly he deserves all which has come to him for he has always stood for all that was great and noble in the profession of his choice. Unassuming and of a most lovable character with a splendid capacity for work, the key-note of his success, he combines a magnanimous spirit, which makes his life an ideal, fitted to rank side by side with any and all of the glorious names in medical history.

It will prove interesting, in this connection, to reproduce here from *The Toronto News* of August 20th, the details of this famous chair, as furnished that newspaper by Professor Goldwin Smith:

"This chair was one of five founded by King Henry VIII. in 1546, to each of which a yearly stipend of £40 was assigned. King James I. augmented the Professorship of Medicine by annexing to the chair, in 1617, the Mastership of the Hospital at Gwelme, in Oxfordshire. Later the Aldrichian Professorship of the Practice of Medicine, with an emolument of about £130 a year, was annexed to the chair. Dr. Osler, in addition to his duties as lecturer, will act as an examiner in all examinations for degrees in medicine granted by the University. Previous holders of the chair were: 1546, John Warner, D.M., Warden of All Souls; 1554, Thomas Francis, D.M., Ch.Ch.; 1561, Walter Bailey, B.M., Fellow of New College; 1567, Bartholomew Warner, D.M., St. John's; 1612, Thomas Clayton, D.M., Balliol,

Principal of Broadgates Hall, Master of Pembroke: 1647, Thomas Clayton, sometime Fellow of Pembroke: 1665, James Hyde, D.M., Principal of Magdalen Hall: 1681, John Luffe, D.M., St. Mary Hall: 1698, Thomas Hoy, D.M., Fellow of St. John's: 1718, Joshua Lasher, D.M., Fellow of St. John's: 1729, William Beauvoix, D.M., sometime Fellow of Pembroke: 1730, William Woodford, D.M., Fellow of New College: 1759, John Kelly, D.M., Student of Ch.Ch.: 1772, William Vivian, D.M., Fellow of Corpus; Sir Christopher Pegge, D.M., Ch.Ch., sometime Fellow of Oriel: 1822, John Kidd, D.M., sometime Student of Ch.Ch.: 1851, James Adey Ogle, D.M., Trinity: 1857, Henry Wentworth Arland, D.M., Ch.Ch., sometime Fellow of All Souls; Dr. John Scott Burdon-Sanderson."

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### NEWS ITEMS

SIR WILLIAM BANKS, the noted English surgeon, is dead.

ON August 26th there were four cases of smallpox in Belleville, Ont.

DR. W. S. FRALEIGH, College Street, Toronto, is dead, aged fifty years.

DR. GEORGE W. BROWN, Port Arthur, Ont., is visiting friends in Toronto.

DR. E. BENSON, City Coroner of Winnipeg, is dead of a paralytic stroke.

THE death is announced of Dr. John Cascaden, ex-M.P.P., Dutton, Ont., at the age of 64 years.

DR. JOHN A. CONKEY, Indianapolis, a graduate of Toronto University, has been visiting in Toronto.

THERE is a typhoid epidemic in both London and St. Thomas, Ont., each having over one hundred cases.

TORONTO GENERAL HOSPITAL.—During August there were 250 admitted, 243 discharged and 16 died.

R. S. CHEFFEY, M.D., formerly of Alliston and Beeton, Ont., died in Toronto, on the 10th of September.

THE Provincial Board of Health of Quebec has approved of the medical inspection of schools in that province.

DR. GORDON BELL, Winnipeg, has been appointed to the Chair of Pathology and Bacteriology in the University of Manitoba.

DR. WILLIAM S. THAYER, Associate Professor of Medicine at Baltimore, will probably be Dr. Osler's successor at Johns Hopkins.

DR. F. MONTIZAMBERT, Director-General of Public Health, has returned to Ottawa, after inspecting quarantine in British Columbia.

THROUGH the efforts of Dr. H. C. Wrinch, formerly House Surgeon in St. Michael's Hospital, Toronto, a hospital has been completed at Hazleton, B.C.

MONTREAL GENERAL HOSPITAL has thirty cases of typhoid fever; the Notre Dame, six; the Royal Victoria, over thirty, 25 per cent. more than last year.

THE TORONTO FREE HOSPITAL FOR CONSUMPTIVES, near Weston, is now receiving patients, and provision has been made for at least twenty-five from Toronto.

SWAT CHWAN YIN, a Chinese graduate of the Medical Faculty of Toronto University, has become a licentiate of the Royal College of Physicians, London, Eng.

OTTAWA ISOLATION HOSPITAL.—The County Judge of Carleton will investigate charges of irregularity and negligence in connection with the Ottawa Isolation Hospital.

THE *Lancet*, London, Eng., says of Dr. Osler: "We heartily congratulate the Crown upon its choice, and no less heartily do we felicitate the University upon adding to the number of its professors so brilliant an exponent of science."

DR. FERGUS BLACK and family have moved to Springfield, Elgin County. Dr. Black has purchased a large practice at Springfield. The doctor has been a resident of Port Colborne for about ten years, and has always been a very estimable citizen.

**TORONTO BRANCH, VICTORIAN ORDER OF NURSES.**—The annual meeting of the Toronto Branch took place recently in this city, and apparently from the reports submitted this Branch is in a very flourishing condition. Dr. Harley Smith presented the annual medical report. The visits paid by the nurses numbered 5,802. It was announced that of the \$52,500 subscribed in Toronto towards the Cottage Hospital Fund, that \$32,000 had been collected.

**ANNUAL MEETING OF THE EXECUTIVE HEALTH OFFICERS OF ONTARIO.**—The nineteenth annual meeting of the Association of the Executive Health Officers of Ontario was held at Sarnia on July 13th, and in the absence of the President of the Association (Dr. Hall, of Mallorytown), Dr. Lane, of Chatham, filled the chair. Papers were read by Dr. Hodgetts, Secretary of the Ontario Board of Health; Dr. Bryce of Ottawa; Geo. Nasmith, M.A., Ph.D., of Toronto, and others. During the course of the meeting the regular quarterly meeting of the Ontario Board of Health was held, at which a resolution was adopted recommending that an Order-in-Council be passed, making it obligatory upon physicians to report all cases of tuberculosis to the local health officer.

**MARITIME MEDICAL ASSOCIATION.**—The Maritime Medical Association met in Halifax, N.S., on July 6th and 7th. It was decided to hold the next annual meeting at Charlottetown, P.E.I. The following officers were elected: President, Dr. S. R. Jenkins, Charlottetown; Vice-President for New Brunswick, Dr. G. C. Van Wart, Fredericton; Vice-President for Nova Scotia, Dr. G. E. DeWitt, Wolfville; Secretary, Dr. T. D. Walker, St. John, N.B.; Treasurer, Dr. Huntley Macdonald, Antigonish, N.S.; Secretary of Local Committee of Arrangements at Charlottetown, Dr. H. D. Johnson. It was decided to ask the Canadian Medical Association to meet in Halifax in 1906. Among the visitors present were: Dr. E. W. Cushing, Boston; Dr. C. Simon, Baltimore; Dr. Thos. Cullen, of Baltimore; Dr. Walter Chipman, Montreal; Dr. F. A. Codman, of Boston; Dr. F. W. Hamilton, of Montreal.

FOURTH PAN-AMERICAN MEDICAL CONGRESS.—The next meeting of the Pan-American Congress will be held in Panama the latter part of December. The Pan-American Congress meets every three years. It was started by Dr. William Pepper, of Philadelphia, Dr. C. A. L. Reed, of Cincinnati, Dr. Albert Van der Veer, of Albany, and Dr. R. L. E. Johnson, of Washington. The first meeting was held in Washington in September, 1893, the second in 1896. The third was to have been held in Venezuela in 1899, but was given up on account of the war in that country. The place of meeting was changed to Cúcuta, but had to be postponed until 1901 on account of the fever there. These meetings have always been well attended, and it is thought that Panama will be an interesting place for the convention. Further particulars will be sent out from time to time to the journals together with notifications of the different officers appointed to represent this and other countries.

ANNUAL MEETING OF THE MEDICAL SOCIETY OF NEW BRUNSWICK.—The twenty-fourth annual meeting of the Medical Society of New Brunswick was held in St. John, on the 19th and 20th of July, under the Presidency of Dr. J. Douglas Lawson. The following delegates were present from the Maine Medical Association: Dr. G. M. Woodcock, Bangor; Dr. Augustin S. Thayer, Portland, and Dr. Daniel McCann, of Bangor. Several very interesting papers were read and valuable discussions ensued. The officers elected for the ensuing year were: President, Dr. A. R. Meyers, Moncton; 1st Vice-President, Dr. E. T. Gaudet, St. Joseph; 2nd Vice-President, Dr. G. N. Pearson, Sussex; Secretary, Dr. L. R. Murray, Sussex; Corresponding Secretary, Dr. W. H. Irvine, Fredericton; Trustees, Drs. J. M. Deacon, Moncton; J. McNichol, Bathurst; J. C. Mott, St. John. St. John was selected for the next place of meeting. A paper which excited a good deal of discussion was one by Dr. T. Morris, of St. John, on the relationship existing between the physician, druggist, and patient, which resulted in the appointment of a special committee to consider the whole subject and report at the next annual meeting. This committee consists of Dr. Meyers, of Moncton; Dr. Morris, of St. John, and Dr. Pearson, of Sussex.

## Obituaries

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### V. H. MOORE, M.D.

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The death took place suddenly on the afternoon of June 8th of a physician who was widely known throughout the Dominion of Canada, Dr. V. H. Moore, of Brockville. It was well known that Dr. Moore had not enjoyed the best of health for some years past, but latterly had improved and had expected to take the trip to the Canadian Medical Association to Vancouver. Deceased was 56 years of age and was a graduate of the class of 1870 of Queen's University. He was for many years the representative for Queen's on the Ontario Medical Council and was president in 1890. He was also a past president of the Canadian Medical Association. Queen's conferred on him the degree of LL.D. in 1903.

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### ROLLO CAMPBELL, M.D.

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Dr. Rollo Campbell, of Montreal, son of Dr. F. W. Campbell, Dean of the Medical Faculty of Bishop's, Montreal, died recently in that city of typhoid fever. He was about forty years of age, and was graduated from Bishop's in 1886, with honors, and studied later in Edinburgh. From the time of his graduation he was connected with the teaching staff of Bishop's and was for many years on the consulting staff of the Montreal dispensary. He was also one of the assistant surgeons at the Western Hospital.

## Special Selection

### CHOREA AND ANEMIA.

BY ROSHIER W. MILLER, M.D., PH.G., BARTON HEIGHTS, VA.,

Lecturer on Nervous and Mental Diseases, and Professor of Theory and Practice of Pharmacy, University College of Medicine, Richmond, Virginia.

In the etiology of chorea nothing is noted relative to anemia. It is simply accounted as an accompanying symptom of the condition. Medical literature emphasizes the relation between rheumatism and chorea, with anemia as an important symptom. After observation of several cases, I am strongly of opinion, however, that anemia as a causative factor is worthy of investigation.

Anemia of toxic origin presents pathological conditions, which favor the production of choreic affections. It is true that simple anemia is, as a rule, of secondary origin, and, viewed in this light, it may be argued that of chorea arises, it is the result of the primary and not of the secondary conditions thus agreeing with the admitted etiology. This argument, however, will not satisfactorily explain those cases of chorea which arise remotely from the primary condition, but recently from the secondary effects.

I submit three cases in which symptoms, treatment, and recovery seem to intimate at least a possible relation between anemia and chorea.

CASE 1.—A female child of eight years gave a history of typhoid fever eight months prior to my visit. According to the mother's statement, the child had made a quick and good recovery, gaining rapidly in weight and exhibiting the energy of her former life. Six months later she became irritable and pale, with pain in her arms and legs, which condition was soon followed by gastric disorders and irregular spasms of the muscles of the face. Simple anemia was in evidence from objective and subjective symptoms alone, but was unquestioned in the light of the results obtained from blood examination—the red blood element being present to the extent of barley 3,000,000 red corpuscles per c.m.

This case was treated with two teaspoonfuls of Pepto Mangan (Gude) and two drops of Fowler's solution, three times a

day. After gastric symptoms had abated somewhat, two raw eggs per day were added to the diet. The patient was discharged in five weeks, completely recovered.

CASE 2.—A female child of 10 years of age; gave history of malaria (a well-defined case of intermittent fever) one year previously. The pallid condition of the child induced the mother to solicit my aid. Upon examination, I found slight choreaic movements which had escaped the mother's eye, though she did admit that the child "could not sit still very long at a time," and "was constantly working her fingers." The blood examination revealed no plasmodium. The red cells were reduced to 2,800,000 per c.m., with a proportionate decrease of hemoglobin.

Pepto-Mangan (Gude) alone was employed in doses of two drams in a glass of milk three times a day. The blood examination four weeks later showed red cells present to the amount of 3,000,000 per c.m., at which time I dismissed the case completely recovered.

CASE 3.—A female child of 13 years. Two months before my visit, the mother informed me, the child became peevish and pale, and was reprobated at school for her inability to write neatly. She was taken from school, but she grew rapidly worse. Morning nausea, vomiting, headache, and anorexia were her daily companions. I found her with pronounced histrionic spasm with involvement of the upper and lower extremities. Hemic murmurs were plainly apparent, but no endocardial irritation could be determined. The blood count showed reduction in red cells to 2,100,000 per c.m. The hemoglobin was reduced to a degree greater than the red cells. A curious feature of the case was the morning nausea. Immediately upon awakening, she experienced nausea, which was followed by vomiting. I discovered, however, that this condition was superinduced by odors from the kitchen, and directed that a small sponge, moistened with creosote water, be placed over the nose and mouth before the preparation for breakfast began. The annoying symptom was promptly checked by this simple method. The anemia in this case may have been produced by malnutrition, but even this view is mere speculation.

The irritability of the stomach in this case was so pronounced that I did not deem it wise to give nourishment—not to speak of medicine—by the stomach. During the first four days rectal alimentation was employed. A nutritive enema, consisting of four ounces of peptonized milk and two drachms of Pepto-Mangan (Gude) was given every six hours. Small amounts of peptonoids with creosote on ice were given by the stomach. Egg

albumin was taken in all the water she drank. After four days, the stomach was tested with small amounts of milk and Pepto-Mangan (Gude). Beginning with four ounces of milk and one dram of Pepto-Mangan (Gude) every four hours and four drams of Pepto-Mangan (Gude) three times a day. This diet, plus three raw eggs a day, together with the above treatment, was all that was employed for six weeks. The blood examination at this time showed a highly gratifying condition—the red cells being present to the extent of 4,100,000 per c.m. The bloom of youth once more tinted the cheek, and the shrine of St. Vitas lost a visitor.—*Virginia Medical Semi-Monthly.*

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### Notes from Our Exchanges.

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The site of an intestinal obstruction (Abrams, *Medicine*), the differentiation of gas, an exudate, or fecal matter may be facilitated by the intestinal reflex.

Gangrene of the lower extremities (Ricketts, *Buffalo Medical Journal*), associated with typhoid fever, is, indeed, rare, compared with the great number of cases of typhoid fever throughout the world. There is no known cause; climate, habits, occupation, and general environment do not offer any solution of the problem. It appears to be due to the bacillus typhosus, but this has not been proven. The disease occasionally attacks the lips, tongue, cheeks, and genitalia. It has also been observed involving the fingers, hands, arms, toes, feet, and legs.

Tyson (Review of Medicine in *Maryland Medical Journal*) is satisfied that the operation (decapsulation of the kidney for chronic Bright's disease) is a serviceable one, and that many lives may be saved and prolonged, and even cures obtained, by its judicious application, although it is obviously taken for granted that the operation should not be performed until the usual medical measures of treatment have been thoroughly applied. On the other hand, the operation should not be deferred until the patient is moribund. He considers cases of parenchymatous nephritis more favorable for operation than cases of interstitial nephritis, while obviously less satisfactory results are to be expected where there are extensive cardio-vascular changes.

Certain acute symptoms, appearing in the mother, according to William A. Northridge (*Brooklyn Medical Journal*), call for weaning for her sake. These are principally faintness, vertigo, palpitation, weakness, night sweats, languor, tremor and cough. On weaning being accomplished they quickly disappear. In my experience these symptoms come on so late in the nursing period that weaning can be done with little danger to the nursling.

According to Jesse S. Meyer (in charge of *Internal Medicine, Interstate Medical Journal*), Boas does not believe that a tube can be passed through the sigmoid flexure, and states that he has never succeeded in passing a tube further than 15 to 20 cm. In those cases in which it is claimed that the tube was introduced, a half meter or more, it has simply been coiled up in the rectum. This he has demonstrated, not only upon the living, but also upon the cadaver.

Doubtless disease is often the result of draught (A. N. Bell, in *The Sanitarian*)—that is to say—of the passage of a current of cold air sharply across or against a portion of the body that is exposed to it; but the danger of this is greatly enhanced by too close confinement. Persons who habitually expose themselves to an abundance of fresh air rarely suffer from such causes. Some there are, however, on account of apparently inexplicable reasons who are supersensitive to such conditions. But these, above other persons, find their best protection in habituating themselves to a plenary supply of fresh air under all circumstances; by woollen clothing and by particularly avoiding small bedrooms and all such conditions as are engendered by them.

We have endeavored to ascertain (McCrae, Fysche and Ainley, *Acute Lobar Pneumonia, Montreal Medical Journal*) what proportion of the population of Montreal is employed in outdoor work, and this we find difficult, because of the great differences of conditions, due to climate, between summer and winter of 444 cases, 126 (28.4 per cent.) were engaged in outdoor work, 318 (71.6 per cent.) in indoor occupations; if we allow that one-fifth of the population is engaged in outdoor work (this figure is probably too high), the outdoor worker has suffered 1½ times as frequently as the indoor worker; if we allow that 1-10 only of the population is so employed, the outdoor worker is 3½ times as liable. In any case, our figures tend to show that the outdoor worker is more frequently attacked.

# Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXIII.

TORONTO, OCTOBER, 1904.

No. 4.

## Original Articles

### ON PANCREATIC INFLAMMATIONS IN THEIR RELATIONSHIP TO CHOLELITHIASIS, AND THEIR TREATMENT.

By A. W. MAYO ROBSON, F.R.C.S.,

Vice-President and Hunterian Professor Royal College of Surgeons, Eng.

*Mr. President and Gentlemen,—* Your kind invitation to give the Address in Surgery before the Canadian Medical Association, accompanied as it was by other temptations, especially that of a visit to this delightful and important part of Greater Britain, left me no choice but to accept the proposed honor.

My only difficulty lay in the selection of a subject, but as I have been for some time working on the pathology and surgery of the pancreas, I ventured to think that pancreatic inflammations in their relationship to cholelithiasis might prove of sufficient interest and importance to engage your attention.

If my surmise falls short of my wishes and of your expectation, I must beforehand crave your forgiveness.

Among the many complications of gall-stones, pancreatitis in its various forms is now known to be one of the most important, though the relationship has only comparatively recently been recognized.

The bile ducts and the pancreas are so intimately related in

Address in Surgery delivered before the Canadian Medical Association at Vancouver, B.C., August 24th, 1904.

their development and their anatomy that it can excite no surprise to find them frequently associated in their diseases; and though we frequently find cholelithiasis without pancreatic troubles, it is much less common to have inflammation of the pancreas, whether acute, subacute or chronic, without finding common duct cholelithiasis. The reason for this association is not far to seek; it is due to the junction of the common bile duct and the duct of Wirsung at the ampulla of Vater, and their common opening into the duodenum, a channel always containing organisms ready, under certain conditions, to invade and become virulent.

Pancreatitis is probably always a secondary disease and usually dependent on infection spreading from the common bile duct or duodenum. It may be asked, if common duct cholelithiasis and pancreatitis are so often associated, why should some cases of common duct obstruction go on for months or years without the pancreas participating?

As I shall hope to show by lantern slides and by clinical evidence, the explanation of the presence or absence of pancreatitis as a complication of cholelithiasis is an anatomical one, though the degree of inflammation when infection does occur, is in a great measure a vital process, dependent on the powers of resistance of the individual.

I must ask you to excuse me for taking you back to the dissecting room for a few minutes, as, though doubtless you are well acquainted with the normal anatomy of the pancreas, there may be some who are unacquainted with the great number of variations that may be encountered; which varieties may save a patient from or may commit him to pancreatitis should he be unfortunate enough to suffer from common duct cholelithiasis.

The common bile duct, starting by the junction of the cystic and hepatic duct, courses along the free border of the lesser omentum associated with the portal vein and hepatic artery; it then passes behind the first portion of the duodenum, and soon comes into relation with the pancreas, which it either grooves deeply or passes through or behind, before it pierces the wall of the second part of the duodenum, where it empties into the diverticulum of Vater along with the duct of Wirsung. It may be divided into four portions: (a) The supra-duodenal portion; (b) the retro-duodenal portion; (c) the pancreatic portion; (d) the intra-parietal portion. The latter two only are important for our present purpose.

If the choledochus passes behind and not through the head of the pancreas, the duct may escape pressure when the pancreas

is congested or otherwise swollen; whereas if it passes through the gland, any congestion or swelling of the pancreas will, by pressing on the common bile duct, bring on jaundice, with its various sequelæ. Thus is explained, to my mind, many of the cases of so-called catarrhal jaundice, which may come on as an extension from gastro-duodenal catarrh, or in the course of a pneumonia, or during typhoid fever, influenza and other ailments, and which I believe to be often dependent on catarrhal inflammation of the pancreas, leading to pressure on the bile ducts. In some cases I have proved this hypothesis to be correct at operations undertaken for chronic jaundice.

As the duct is completely embraced by the pancreas in 62 per cent. of all cases, we may conclude that in nearly two-thirds a swelling of the head of the pancreas will produce jaundice; and curiously, this percentage coincides with Dr. Cummidge's and my clinical observations and pathological investigations on the urine of pancreatic cases.

Not only so, but when the head of the pancreas embraces the common bile duct, should a gall-stone pass down, it will almost certainly exercise pressure on the gland, and thus directly interfere with its function and with the discharge of its secretion.

The fourth portion is where the duct enters the wall of the second part of the duodenum and ends in the ampulla of Vater, into which small cavity the duct of Wirsung also debouches. This part of the common duct comprises all that portion of the canal contained in the thickness of the wall of the duodenum. It passes obliquely through the muscular coat of the intestine, and then dilates into a little reservoir underneath the mucous membrane, into which the main pancreatic duct also opens. This is known as the ampulla of Vater. This ampulla, a little oval cavity, may be well seen in a section of the wall of the duodenum, in the axis of the common duct. The opening of the common duct is above that of the pancreatic duct, and the two are separated by a little transverse fold of mucous membrane. The ampulla measures from six to seven millimetres in length, and from four to five in breadth, and with the termination of the two ducts, is surrounded by a thin layer of unstriped muscular tissue, forming a sphincter (Oddi).

The ampulla opens into the duodenum by a little round or elliptical orifice, which is the narrowest part of the bile channel. It is important to note that the length of the diverticulum of Vater may vary from zero to 11 millimetres, the average being 3.9 millimetres, according to Opie, who measured one hundred specimens. Viewed from the interior of the duodenum the

ampulla forms a rounded eminence of the mucous membrane, known as the caruncula major of Santorini, the opening being seen at the apex of the caruncle. It is distant 8 to 12 centimetres from the pylorus. Above it there is constantly found a small fold of mucous membrane, which must be raised in order that the caruncle and its orifice may be clearly seen. Running downwards from the caruncle is a small vertical fold of mucous membrane known as the frenum carunculae. Above the caruncula major is found a smaller eminence, the caruncula minor, marking the termination of the accessory pancreatic duct, or duct of Santorini, which opens into the duodenum about three-quarters of an inch above the biliary papilla.

The mode of formation of the ampulla of Vater and the termination of the common and pancreatic ducts are liable to great variations.

Letulle and Nattan Lorrier distinguish four types, to which may be added a fifth, recently shown by a dissection now in the Hunterian Museum.

The first type is the classical one described above. In the second type the pancreatic duct joins the common duct some little distance from the duodenum, the ampulla of Vater is absent, and the duct opens into the duodenum by a small, flat, oval orifice. In the third type the two ducts open into a small fossa in the wall of the duodenum, while the caruncle and the ampulla of Vater are absent.

In the fourth type the caruncle is well developed, but the ampulla is absent, the two ducts opening side by side at the apex of the caruncle.

In the fifth type the common bile duct opens along with the duct of Santorini and Wirsung's duct enters the duodenum separately.

It will be readily understood that under ordinary circumstances when a gall-stone passes along the common bile duct and reaches the ampulla of Vater, it will not only occlude the bile passages, but also the chief excretory duct of the pancreas, the secretion of which will be retained. Should infection occur, pancreatitis becomes inevitable, and on the condition of the individual, as well as on the nature of the infection, will depend what occurs, whether a mild catarrh of the pancreatic ducts, an interstitial pancreatitis, an extremely serious suppurative catarrh, or a parenchymatous inflammation in the shape of acute pancreatitis.

Opie, finding in one case a very small gall-stone and a large ampulla of Vater, constructed a pretty theory, which is probably

true in some rare cases, as in the one reported from Dr. Halsted's clinic in the Johns Hopkins Hospital, and in another case that occurred in Buffalo, which was mentioned to me by my friend, Dr. Roswell Park, but which I believe has not yet been reported. Opie says that under these circumstances the bile and pancreatic ducts are converted into one direct tube, as shown in the diagram, and that the bile being forced into the pancreatic duct, sets up acute pancreatitis.

He appears to think that pure non-infected bile is capable of doing this, and he has apparently demonstrated the possibility by experiments on animals. For my own part, I believe that infection is the important factor, and that the bile is simply the conveyer of infection.

That this anatomical arrangement described by Opie is not necessary in order that acute pancreatitis may develop, is shown by cases reported where no gall-stones were present, and by an instructive case under the care of Dr. Fison, of Salisbury, where at the autopsy of a fatal acute pancreatitis a gall-stone was completely filling the ampulla of Vater and occluding both the bile and pancreatic ducts. It will be seen that while the normal termination and the second variety of termination of the ducts will favor the onset of pancreatitis in case of common duct cholelithiasis, the variations 3 and 4, in which the two ducts are separate, will possibly save the patient from the serious secondary pancreatic troubles, and in variation 5, a small portion of the gland only will become infected.

But the pancreatic ducts themselves are also subject to great variations that may influence the course of events. The beautifully dissected specimen from the Hunterian Museum, a photograph of which I throw on the screen, and the X-ray photograph of Wirsung's duct injected with mercury, also shown, demonstrate the normal anatomy of the pancreatic ducts and show how the lobules have each a separate duct that opens into the main channel or duct of Wirsung, which itself opens into the ampulla of Vater, or directly into the duodenum, as described; but it will also be noticed that a smaller channel, the duct of Santorini, usually discharges some of the secretion of the pancreas directly into the duodenum, and that in a certain proportion of cases the two ducts communicate.

The diagrams I now point out will explain this. They show the result of observations by Opie on 100 cadavers, in which the ducts were injected and photographed, with the following results:

In 90 specimens the two ducts are united; in 10 two wholly independent ducts enter the intestine.

1. Of the ducts in anastomosis: (1) Duct of Wirsung, larger in 84—(a) duct of Santorini patent in 63, (b) duct of Santorini not patent in 21. (2) Duct of Santorini larger in 6—(a) duct of Wirsung patent in 6, (b) duct of Wirsung not patent, 0.

2. Ducts not in anastomosis, in 10: (a) Duct of Wirsung, larger in 5, (b) duct of Santorini, larger in 5.

In 89 per cent. the duct of Wirsung was larger than the duct of Santorini. In 21 per cent. the duct of Santorini was apparently obliterated near its termination. In 6 cases the duct of Santorini was larger than the duct of Wirsung. In all cases where the duct of Santorini is patent it diminishes in size towards the duodenum. Thus the duct of Santorini cannot be relied on in many cases to supplement the duct of Wirsung, if it be obstructed; moreover, the duct of Santorini, even if patent and communicating with the duodenum, may itself be compressed by a moderate sized gall-stone passing down the pancreatic portion of the common duct. Now it might be argued that, if the two ducts communicate, why should not the duct of Santorini act as a safety valve to the duct of Wirsung when it is compressed, and thus free the pancreas from the retained secretion which is in danger of becoming septic?

It will be seen that in only half or less than half of all cases will the duct of Santorini act as a safety valve if the duct of Wirsung is obstructed, for, although in 63 per cent. of cases the duct opens at the same time into the main channel and into the intestine, yet in probably less than half of these is the anastomosis efficient as a through channel.

The reasons why gall-stones in the common bile duct do not always produce pancreatic inflammation are:

1. Some gall-stones are so large that they never reach the pancreatic portion of the duct, but remain in the supraduodenal portions of the common duct, producing jaundice, but no pancreatitis. The following is an example:

Mr. S., aged sixty-five, had for two years been subject to occasional attacks of epigastric pain. In January, 1903, a severe attack was followed by jaundice, since which time he had rapidly lost weight, and the jaundice had never disappeared. Pain after food had been a marked feature. He had neither vomited blood nor had malena. There was no dilatation of the stomach, and no evidence of tumor. The recti were rigid. He was seen by a well known physician, who diagnosed cancer of

the pancreas. An examination of the urine, however, showed an entire absence of pancreatic crystals, proving the absence of cancer and of inflammation of the pancreas. An operation was performed on November 24th, 1903, when a gall-stone the size of a filbert was discovered in the supra-duodenal portion of the common duct and removed through an incision, which was afterwards sutured. The pancreas was normal. The gall-bladder was drained. Recovery was uninterrupted, and the patient is now well.

2. In some cases the bile ducts and pancreatic ducts open by separate orifices, as shown in the illustration, and any gall-stone passing down the common duct will then not necessarily compress or occlude the pancreatic duct.

3. In exceptional cases the duct of Santorini is the principal outlet for the pancreatic fluid, it being of such a size as to afford a safe outlet to the secretion, even when the duct of Wirsung is obstructed.

In order to make the relationship between gall-stones and inflammation of the pancreas quite clear, I shall give the classification of pancreatitis that I recently proposed in the Hunterian lectures, which, I believe, includes all the varieties. Pancreatic inflammation may be catarrhal, in which the inflammatory trouble is in the ducts, or parenchymatous, in which the substance of the pancreas is involved. The former resemble the different forms of cholangitis, with which, indeed, they are frequently associated; the latter bear more resemblance to inflammatory affections of the appendix, "suppurative and gangrenous appendicitis." The following show the classification at a glance:

*Catarrhal Inflammations.*—(a) Simple catarrh, acute and chronic, (b) suppurative catarrh, (c) pancreo-lithic catarrh.

*Parenchymatous Inflammations.*—Acute: (a) Hemorrhagic pancreatitis—(1) Ultra-acute, in which the hemorrhage precedes the inflammation, the bleeding being profuse, and both within and outside the gland; (2) acute, in which inflammation precedes the hemorrhage, which is less profuse and is distributed in patches through the gland. (b) Gangrenous pancreatitis; (c) suppurative pancreatitis (diffuse suppuration). Subacute: Abscess of the pancreas (not diffuse suppuration). Chronic: (a) Interstitial pancreatitis—(1) Interlobular, (2) interacinar; (b) cirrhosis of the pancreas.

Although in my address to-day I am only dealing with one cause of pancreatic trouble, yet it is the chief one, and in a very large percentage of cases the only cause of pancreatitis in its

various forms, but in order to make the position clear I will relate the other etiological conditions:

The *etiology* of pancreatitis may be classified under predisposing and exciting causes. Among the predisposing causes are: (1) Obstruction in the ducts, the result of gall-stones, duodenal catarrh, pancreatic calculi, cancer of the papilla or of the head of the pancreas, ulcer of the duodenum, followed by cicatrical stenosis of the papilla, ascarides, and lumbrici; (2) injury either from a bruise, as by manipulation in operating, or from a crush, as by a blow in the epigastrium, or from wounding by a sharp instrument; (3) hemorrhage into the gland; (4) general ailments, such as typhoid fever, influenza and mumps; (5) certain anatomical peculiarities in the pancreas or its ducts; (6) atheroma or fatty degeneration of the blood vessels; (7) new growth, e.g., cancer or sarcoma.

The chief exciting causes are: (1) Infection conveyed (a) from the blood, as in syphilis or pyemia; (b) from the duodenum, as in gall-stone obstruction or gastro-intestinal catarrh; (c) by extension inwards from adjoining organs, as in gastric ulcer or cancer eroding the pancreas. (2) Irritation, as in alcoholism (doubtful).

So long as the concretions remain in the gall-bladder or cystic duct, it is unlikely that the pancreas will participate in the cholecystitis, unless the gland has been originally infected from the duodenum, as possibly occurred in the following case: In this case, gall-stones in the gall-bladder were associated with catarrh of the pancreas, which must have either been due to an extension of the catarrh of the gall-bladder and bile ducts to the pancreas, or have resulted from the passage of a gall-stone from the common duct on some former occasion, which had led to infection both of the bile and pancreatic ducts. A lady, aged fifty, had for several years suffered from attacks of distinct biliary colic, which during the past two months had been followed by jaundice, fever and collapse. There had recently been loss of flesh. On examining the urine, fine pancreatic crystals were discovered, and at the operation on April 30th, 1903, forty gall-stones were removed from the gall-bladder and cystic duct. None were found in the common duct, though the head of the pancreas was distinctly swollen and harder than normal. The gall-bladder was drained. The patient made a good recovery and is now well. Normal weight has been regained, and there is no longer any evidence of disturbed metabolism.

Even if gall-stones pass into the common duct and are not

long detained in it, a catarrhal pancreatitis may supervene, as in the following case: A patient, aged thirty-eight, after being subject to indigestion for years had biliary colic in July, 1899, and passed gall-stones, which were found in the motions. Subsequently the attacks of pain were frequent and severe, necessitating the use of morphia. They were usually accompanied by icterus, which, though slight, probably never quite disappeared. When I saw him in November, 1903, he had lost flesh and was prevented from carrying on his professional duties. The metabolic and digestive signs of pancreatic catarrh were well marked. At the operation, on November 23rd, 1903, no gall-stones were found, though the gall-bladder was thickened and adherent to contiguous organs. The pancreas was firmer than usual, though not very much swollen. Cholecystotomy led to recovery, though the drainage of the bile ducts had to be continued for three months. The patient is now well.

In this case the pancreatic catarrh had evidently been set up by the passage of gall-stones through the common duct. The pancreatitis had, however, persisted, and was not only keeping up painful symptoms, but leading to obstruction of the bile ducts and to interference with nutrition. Now this case would formerly have been called catarrhal jaundice, whereas it was really due to catarrhal pancreatitis, as proved by the digestive and metabolic signs, and later by operation.

I could relate other instances, but this case will suffice to show that pancreatic catarrh may be produced by a passing gall-stone and persist after the cause has disappeared, and that drainage of the bile ducts is followed by cure.

If, after some time, the stone passes, the pancreatic catarrh may subside and leave no trace, or the swelling of the pancreas may persist, become true interstitial pancreatitis, and for a long time keep up pressure on the common bile duct, leading to a persistence of the jaundice, though there is no concretion left to cause obstruction, nor any evidence of disease of the liver beyond the jaundice due to mechanical obstruction. Thus may be explained some of the cases of very chronic jaundice, with so-called chronic biliary catarrh, a number of which cases I have operated on.

While one could not say that there is no such disease as chronic catarrhal jaundice, I suspect that many cases so designated are really instances of chronic interstitial pancreatitis, in which the common bile duct is compressed by the swollen pancreas. The following case is a good example:

Mr. H., aged twenty-six, had had jaundice since the age of

seventeen, it having supervened upon a severe attack of what appeared to be biliary colic, of which he had had several seizures since the age of fourteen. For two or three years he had had severe ague-like attacks, and during that time he lost very seriously in weight and strength; but during the past two years there had been no rigors, and he had also been free from the severe paroxysms of pain, though he had had slighter seizures, after all of which the jaundice became more intense. The patient was then only weighing nine stones, and all the bile was apparently passing into the urine and none by the bowels. There was some swelling in the region of the pancreas, besides slight enlargement of the liver and a very decided enlargement of the spleen. Fine pancreatic crystals were found in the urine.

Cholecystotomy was performed on January 31st, 1901, when the gall-bladder was found contracted and adherent, and the head of the pancreas enlarged and very hard, but no gall-stones were present. For a few days the jaundice was deeper; it then became gradually less, until it almost disappeared. In ten days the stools became bile-stained, and had since retained their color. He returned home on April 16th, having gained nearly half a stone in weight. Oct., 1901.—After the previous operation the patient was well for some months, except for slight jaundice. Recently there had been a little discharge of bile from the fistula, which he wished to have cured on account of the inconvenience. Cholecystenterostomy was performed on October 3rd, 1901. The sinus was dissected out and the fundus of the gall-bladder connected to the transverse colon. The patient made a good recovery from the operation and left looking much better. When heard of later he was following his occupation.

If the gall-stone causing obstruction be removed by operation from the common duct and drainage of the infected bile ducts be effected before the catarrhal has passed into the interstitial form of pancreatitis, a complete cure may be expected, as in the following cases:

1. The patient, a lady, aged thirty-four, had had symptoms of gall-stones for four years and had been under treatment for ulcer of the stomach, but there had been no hematemesis. Four months previously jaundice had come on after an attack of pain, since which time the attacks had been frequent, and were always followed by an increase of the jaundice and by rigors and fever. On one occasion the gall-bladder was distended; when seen there was a slight tinge of jaundice. She had lost three stones in weight. There was an absence of enlargement of the liver or gall-bladder, but marked tenderness over the

gall-bladder was elicited. Pancreatic crystals were found in the urine, and digestive symptoms were present.

At the operation on April 23rd, 1903, one large calculus was removed from the cystic duct and some smaller ones from the common duct by choledochotomy through separate incisions in the two ducts. The common duct was sutured and the cystic duct drained. The pancreas was found to be enlarged and inflamed. The patient made a good recovery and is now well.

Were it necessary I could give a good many examples, but another will, perhaps, suffice.

2. The patient, a lady, aged fifty-nine, began to suffer from abdominal pain followed by jaundice and vomiting twenty-six years ago, and she had been subject to attacks at longer or shorter intervals ever since. Fifteen years ago she was in bed for three months with constant pain, but never had rigors. A fortnight ago she had a severe attack of pain followed by jaundice, which persisted. She had lost four stones in weight. There was no enlargement of the liver or gall-bladder, but some dilatation of the stomach. Pancreatic crystals were found in the urine. At the operation, on March 10th, 1903, a small gall-bladder was found, containing two gall-stones, which were removed and the gall-bladder drained. The common and hepatic ducts contained many stones, which were removed through an incision in the common duct. The pancreas was slightly swollen. The patient made a good recovery and remains well.

The explanation of the pancreatitis in these two cases was manifestly the obstruction of the pancreatic duct, with infection of the secretion, but the complete recovery after operation showed that the inflammation was probably only catarrhal, and not advanced interstitial trouble.

If the gall-stone obstructs the common duct for long, what was at first a simple catarrhal pancreatitis may assume a truly interstitial form, and unless drainage of the bile ducts is continued for some time, or permanent drainage in the shape of cholecystenterostomy is established, relapse will speedily occur. The following case is an example:

Mrs. W., aged fifty-seven, had had two operations previously in Scotland. On the occasion of the first operation, in September, 1902, a number of gall-stones were removed from the gall-bladder, which was drained for a few days, but after the wound had healed the attacks had been repeated as before. A second operation was undertaken by the same surgeon, without finding anything definite. After the wound had healed and the temporary drainage had ceased, the attacks again returned, and the

subsequent history up to the time of my seeing her was that she had almost daily attacks of pain, followed by slight jaundice, and on five or six occasions, usually at intervals of a month, she had had violent seizures necessitating the use of morphia. About five weeks ago the pain was so violent as to cause her to faint, and just before coming to London another violent seizure, accompanied by collapse, occurred. A rigor, with high temperature, 104 or 105 deg., had followed each attack, the temperature between the seizures rising nightly to 101 deg. F. or 102 deg. F. She was rapidly losing flesh and strength. An examination of the urine by Dr. Cummidge showed no albumin or sugar, but well-marked pancreatic crystals, which dissolved in from one to one and a half minutes, rendering, along with other signs, the diagnosis of chronic pancreatitis certain. At the operation, on November 20th, 1903, the adhesions were found to be most extensive. There was well marked enlargement and hardness of the pancreas along its whole length, but it was not nodular. The common duct was carefully examined, but found to be free from concretions, and on opening the gall-bladder a probe was passed through it, and the cystic and common ducts, into the duodenum. While the probe was in position, the pancreas was manipulated and found to compress the duct, thus accounting for the obstruction. Cholecystenterostomy was, therefore, performed, the union being effected to the colon by means of a decalcified bone bobbin. At the time of operation the gall-bladder was separated from its fissure in the liver in order to make it reach the bowel without tension. For a few days after operation, bile was discharged from the torn liver surface in free quantities, but there was no leakage from the newly joined viscera. As the bile obtained a free passage into the bowel, it gradually ceased being discharged from the liver, and the tube was able to be left out at the end of ten days. The wound healed by first intention, and the patient was up at the end of three weeks. She was then able to take and digest her food, and has since been quite free from her old attacks. If the interstitial pancreatitis has persisted for some length of time, it is possible that recovery may be incomplete, and although the jaundice may disappear and the digestive symptoms may be alleviated, the metabolic signs found in the urine many months or even years subsequently, show that recovery is only partial. The following are examples:

Mr. D., aged forty-five, had had painful epigastric attacks for twelve months, with vomiting, but no jaundice. There had been deep jaundice since January 1st, with ague-like attacks, and

the patient had lost two and a half stones in weight. Cholecystotomy was performed on March 29th, 1898. Thickened duct felt, together with swelling of the pancreas; thought to be cancer of the head of the pancreas and common bile duct. Drainage of the gall-bladder for ten days. The patient made a complete recovery, and in August was apparently quite well, having gained a stone in weight. He was in good health in 1901. Though apparently well in January, 1904, an examination of the urine gave the pancreatic reaction, and showed that the original damage to the pancreas had not been completely repaired.

Mrs. D., aged forty-six, had had spasms for years. Acute seizure in July, and three times since. Since July, pain and sickness every two weeks. No tumor felt at any time; jaundice occasionally, after an attack of pain; lost one stone in weight. She had never vomited blood and never had malena. There was tenderness over the gall-bladder, but no tumor. Slight enlargement of the head of the pancreas. Cholecystotomy was performed on December 11th, 1899. Empyema of the gall-bladder. Many stones removed from the gall-bladder and cystic duct. Adhesions broken down. Nodular condition of the head of the pancreas found. The patient made a good recovery and was well in 1904, though an examination of the urine showed the pancreatic reaction, and proved that the metabolic functions of the pancreas were still not normal.

In some cases where operation has been delayed, or drainage of the bile ducts not performed or not long enough continued, the original interstitial pancreatitis may pass on into the inter-acinar variety, in which the islands of Langerhans become involved and glycosuria ensues, as in the two following cases:

Mrs. C., aged fifty-one, who was suffering from persistent jaundice with periodical pains and ague-like seizures that had extended over a long period, was operated on in July, 1895, when several gall-stones were removed and others crushed in the common duct. A tumor of the pancreas was felt, which it was thought at the time might be malignant. The gall-bladder was, therefore, drained into the duodenum by a cholecystenterostomy. The patient completely recovered, and has remained well since the operation, over nine years ago, but examination of the urine recently by Dr. Cumming showed there to be an abundance of dextrose, but no acetone or diacetic acid. Pancreatic crystals were obtained by the "A" reaction, which dissolved in three-quarters to one minute, but none could be isolated by the "B" method. This showed that although the patient has been relieved by the operation and has apparently

enjoyed good health, yet that she is living with a damaged pancreas and consequently glycosuria.

Mr. D., aged forty-two, had an attack of pain in the right hypochondrium ten years ago, but no jaundice. He had been free from attacks up to six weeks ago, when he had a severe attack of pain in the right hypochondrium, radiating to the back and shoulders, accompanied by rigors and vomiting and followed by jaundice. The jaundice had persisted up to the present; no swelling to be felt. An exploratory operation was performed on October 27th, 1898, when a mass thought to be growth in the head of the pancreas was discovered. The patient made a good recovery, with a great relief to the jaundice. I suspect the enlargement of the head of the pancreas was chronic pancreatitis, as it was too soft for scirrhus. I very freely manipulated it to feel if there was a gall-stone in the termination of the common bile duct, and this may have dislodged the obstruction, leading to the relief of the jaundice. A specimen of his urine was obtained in 1904, and although he was reported to be quite well, this was found to give crystals by the "A" reaction, which dissolved in half a minute, and to contain sugar in fair quantity.

This, along with other cases that I know of, leads me to think that it is unwise not to thoroughly drain the bile ducts, and I consider that drainage ought to be continued until the bile becomes free from organisms and its normal route is free from obstructions.

In certain cases, doubtless, recovery occurs without operation, and I have notes of one case where a gentleman of advanced age had deep jaundice associated with glycosuria and with well-marked pancreatic reaction in the urine, pointing to the case being one of pancreatic diabetes. Under general treatment, combined with massage, he regained his health, and is now said to be quite well. In this case it is quite possible that the massage may have dislodged a concretion which was blocking the common bile duct and the pancreatic duct, but as no search was made in the feces, this cannot be proved. As the patient lives abroad, we have not been able to test the urine, which I suspect will still contain glucose.

This case raises the question whether operation ought to be declined because of the presence of a small amount of sugar in the urine. In future, should the patient's condition be fair, I shall feel inclined to recommend operation in order to remove the obstruction, and by drainage to arrest the pathological process going on in the pancreas.

*Suppurative Catarrh.*—It is well known that in some cases

of obstruction of the common bile ducts by gall-stones, the infective cholangitis may press on into suppurative cholangitis, an extremely serious and frequently fatal disease; but until I reported my cases in the Hunterian lectures I believe it had never been suggested that the same condition may occur in the pancreatic ducts. The termination probably depends both on the vital condition of the individual and on the form of the infection, for in one of my cases streptococci were found in the pus, whereas usually the organism is the bacillus coli.

The following cases exemplify three different types of suppurative catarrh, which it will be seen is an extremely serious, though not necessarily a hopeless disease if treated early. If the suppurative catarrh be diffuse and involve the ducts throughout the liver and pancreas, the associated septicemia is very serious, as the following case seen with Dr. Hector Mackenzie proves:

Mr. W., aged sixty-five years, seen on January 4th, 1904. He had had attacks of gall-stones seven years before, and two seizures during the last two years, both of which were followed by jaundice. His present illness started on November 23rd, with severe pain, followed by jaundice. On December 20th a very severe attack of colic was followed by more intense jaundice and enlargement of the liver, with irregular temperature. The patient had had albuminuria for seven or eight years. When I saw him there was tenderness above and to right of the umbilicus and he had severe pain. A specimen of the urine was examined and found to give a marked pancreatic reaction (pointing to acute inflammation), and to contain calcium oxalate crystals. On opening the abdomen on January 7th, firm adhesions were encountered, and on detaching the omentum, phlegmonous cholecystitis was discovered, with gangrene of the fundus of the gall-bladder; pus escaped freely, but the peritoneal cavity was saved from being soiled by means of sponge packing. The common duct was enormously dilated and embraced by the swollen pancreas, but no gall-stones could be felt. On opening the common duct a large quantity of pus and bile escaped. By means of the scoop passed into the common duct and the fingers passed behind the pancreas, a number of gall-stones were extracted, but a hardness could be felt at the papilla which could not be removed. On laying this open after incising the duodenum, a gall-stone was removed from the ampulla of Vater and pus was immediately seen to flow from the duct of Wirsung. The duodenum was then closed, the gangrenous upper part of the gall-bladder was removed, and the common

duct and gall-bladder were drained. The patient bore the operation well, and from that time onward had no more fever, but for the fortnight during which he lived his temperature was persistently subnormal. He had no peritoneal symptoms, and the bowels were moved freely from the second day onward. Calcium chloride had been given before the operation, and at the operation he lost no blood. None was given subsequently to operation, as the rectum was intolerant of injections, and on the eighth day there was rather free oozing of blood from the drainage track, which had to be treated by gauze packing, after which the calcium chloride was renewed and no more bleeding occurred. On the eleventh day the patient became somnolent and declined to take food. From this time he got gradually weaker and died comatose on the fourteenth day in a condition almost resembling that associated with acute atrophy of the liver.

If the suppurative catarrh takes on a very acute form, the development of abscesses in the liver and pancreas may occur and the condition becomes one of pyemia, when the chance of recovery will be very remote, as in the following case:

The patient, a lady, aged sixty-five years, seen with Sir William Broadbent and Dr. Bousfield, was suffering from deep jaundice, suppurative cholangitis, pancreatitis and parotitis of pyemic origin; rigors, with a temperature of 105 deg. occurring daily, or even twice a day, the acute symptoms having come on within a fortnight, though there had been a history of gall-stones for years. The common and hepatic ducts were filled with gall-stones, which were removed through an incision in the common duct and a large quantity of extremely offensive pus and bile was evacuated. At the same time the right parotid gland (the seat of inflammation) was incised. The bile was examined bacteriologically and found to contain the bacillus coli in large numbers; next in numbers were streptococci and another rather fine bacillus, which appeared to grow anaerobically only, and there was a fine spore-bearing organism, probably the bacillus coli putrefaciens. The urine gave a well marked pancreatic reaction. The patient, who had also heart disease and albuminuria, appeared to be doing well for twenty-four hours, when she died suddenly, apparently from cardiac thrombosis.

If the suppurative catarrh assumes a subacute form, it may end in a simple pancreatic abscess, which can be successfully evacuated as in the following case:

Mrs. P., aged sixty-one, gave the history of having been subject to biliary colic for three or four years, though there had

been no jaundice till two and a half years ago, since which time the attacks of pain had always been accompanied by rigors and by deepening of the jaundice. Within a short time of my seeing her, the symptoms had become aggravated and the loss of flesh had become extreme. The patient was so ill that the question of cancer of the pancreas was raised, but the pancreatic reaction in the urine definitely pointed to inflammation and not to growth. At the operation I found the pancreatic portion of the common duct packed with large gall-stones, and the head of the pancreas was markedly swollen. On passing the scoop through the opening in the common duct from the pancreatic portion of the duct, a stone the size of a cherry was extracted, it being covered with offensive pus. This had apparently lodged in a cavity in the head of the pancreas. A profuse discharge of bile and offensive pancreatic fluid, with pus, continued to pass for a week, after which the discharge became gradually less. She made a good recovery, and remains well a year later.

In general, subacute pancreatitis starting as suppurative catarrh, with the formation of a localized abscess, the pancreas may be so damaged that after the abscess has been cured by drainage, the extensive interstitial pancreatitis may ultimately lead to the death of the patient at a longer or shorter interval, as in the following case:

Mr. H., aged forty, had suffered from continuous fever, with exacerbations associated with rigors, that recurred almost daily. He gave the history of failing health for nine months and of having had gall-stone attacks much longer, but the acute symptoms associated with jaundice had only been present for a fortnight before I saw him. The pancreatic reaction was found in the urine. At the operation on October 11th, 1900, he was far too ill to bear a prolonged search, and as the adhesions were very firm, I felt it desirable only to drain the bile ducts through the gall-bladder, though a marked swelling of the pancreas made it appear probable that an abscess might be present. A large quantity of muco-pus drained from the gall-bladder, and a number of gall-stones were removed. The abscess of the pancreas discharged through the drainage tube, after which the pancreatic swelling subsided. The patient made a slow though steady recovery, and returned home early in December. Though he was able to get out and to take food, he never fully regained his strength, and died in February of the following year. At the necropsy the pancreas was found to be much enlarged, and to be the seat of interstitial pancreatitis. The cavity where the abscess had been was occupied by a little pulpy material, but

no further collection of pus was found, nor were any gall-stones discovered in the bile ducts. A microscopic examination of the pancreas showed advanced interstitial pancreatitis.

*Cirrhosis or Atrophy of Pancreas.*—If the infective catarrhal condition persists and does not assume the more dangerous suppurative form, or even if simple obstruction of the pancreatic duct persists from any cause, with only mild infection, we may have an almost analogous condition to the one occurring in cirrhosis of the liver due to the development of fibrous tissue. This more chronic form of interstitial pancreatitis ends in cirrhosis or atrophy of the pancreas, which is probably inevitably fatal from glycosuria. I think it is possible that if it were discovered at an early stage it might be arrested by the removal of the cause, though when fully developed the condition is probably not amenable to any form of treatment.

*Acute Pancreatitis.*—If a small gall-stone happens to descend into an unusually large diverticulum of Vater and to lodge there, it will make a thorough channel from the common bile duct into the pancreatic duct, and so set up acute pancreatitis, the infected bile being forced direct into the pancreatic duct, as in Dr. Halsted's case reported in Opie's work on the pancreas.

But the anatomical conditions just mentioned, though evidently potent, are certainly not necessary for the production of acute pancreatitis. Any gall-stone or stones impacted in the pancreatic portion of the duct, or even filling the ampulla of Vater, may produce acute pancreatitis, as in a case under the care of Dr. Fison, of Salisbury (*Lancet*, 1904).

A man, aged thirty-nine, had a sharp attack of diarrhea on March 27th, 1904, having been previously constipated. The next day, about one and a half hours after dinner, he was seized with severe epigastric pain, followed by vomiting. At 5 p.m. he looked anxious and ill, and the abdomen was tense and tympanitic, but there was no jaundice. The vomiting persisted. There was tenderness over the gall bladder, and to a less degree over the stomach, but no enlargement of the liver or any indication of tumor. Temperature, 98 deg.; pulse, 110.

The next day the temperature was 97 deg. and pulse 120, the vomiting continuing; morphia was given. On the 30th the temperature was 96.8 deg., the pulse 125, small, weak and thready, respiration 36. The pain was easier. Urine scanty and dark. Operation on evening of the 30th, fifty-four hours after first attack of pain. Very extensive fat necrosis found in subcutaneous tissues and in omentum, mesentery, etc. Large quantity of brown, inoffensive fluid in peritoneum. Incision

made into tissues around pancreas through meso-colon. Gall-bladder drained through another incision, many gall-stones removed. Free drainage of abdomen. After recovery from anesthetic the vomiting persisted, and the pulse remained absent from the wrist up to death some hours later. At post-mortem examination, a pint of bloody fluid in peritoneal cavity. Base of meso-colon filled with friable, offensive material, blackish-brown in color and here and there streaked with pus. Pancreas much swollen, and weighed seventeen ounces. Hemorrhagic infiltration in centre of body and another in tail, consistency very firm, with swelling of lobules. In the cystic duct were three gall-stones, in the common duct four, and in the hepatic duct four. One gall-stone, three-eighths of an inch in length, completely filled the ampulla of Vater, into which the duct of Wirsung opened, one-third of an inch from the papilla. The duct of Wirsung did not contain bile.

Urine sent for examination by Dr. Cummidge showed crystals soluble in one-half minute by the "A" reaction, and a few crystals by the "B" reaction soluble in the same time.

The following is Dr. Salusbury Trevor's report of examination of the pancreas:

The gland is enlarged in all its diameters, the margins being rounded off and producing, as a consequence, a sausage-shaped contour. In the head, the middle of the body and the tail are chocolate-colored areas which are fairly sharply differentiated from the surrounding parenchyma in which the normal lobulation is visible. The duct of Wirsung is not bile-stained. The portion of common bile duct attached to the head of the gland appears to be somewhat dilated. Around the gland, as well as in it, are numerous typical foci of fat necrosis.

*Microscopical Examination.*—Sections have been prepared from the head, body and tail in most instances to include the chocolate-colored areas as well as apparently normal parenchyma.

*General Features.*—The dark-colored areas are due to necrosis of the parenchyma, associated with hemorrhage, and in the sections from the head and tail are demarcated off from the neighboring gland acini by well marked zones of inflammatory small-celled infiltration. In the tail section, inflammatory reaction is absent, the necrosed areas merging gradually with the unaffected parenchyma. In the necrosed areas the gland parenchyma is only barely recognizable by a faint alveolar structure, all gland elements having disappeared. The whole of these areas stain badly. In the necrotic portions the smaller blood vessels are filled with more or less hyaline thrombi.

Around the necrotic areas in the head and body is a deposit of old blood pigment, and the appearances rather suggest that here the lesions are of older date than those in the tail. Inflammation is most marked in sections of the head. The remaining gland parenchyma is badly preserved owing to auto-digestion, and the head appears to show a slight grade of chronic interstitial pancreatitis of the interlobular type. Throughout the sections the islands of Langerhans are found with difficulty, and from comparisons with other sections their number in the tail sections, at all events, appears to be diminished. Two of the islands of Langerhans found in the tail sections are very large in size; the cells, however, are rather broken up and into one of them hemorrhage has occurred. Minute changes are not recognizable, owing to bad preservation of the tissue. The epithelium of Wirsung's duct shows distinct signs of a catarrhal change.

*Summary.*—The condition is one of acute pancreatitis with hemorrhage and necrosis (the acute form of hemorrhagic pancreatitis in Mayo Robson's classification).

Owing to Dr. Fison's kindness I am able to show photographs of the extensive fat necrosis and the microscopic appearance of the damaged pancreas.

The following is a case of gangrenous pancreatitis due to gall-stones, which recovered after operation.

Mr. S., aged fifty-eight, had for six years been subject to paroxysmal attacks of acute pain starting in the right hypochondrium and radiating over the abdomen and through to the right scapula, the attacks being accompanied by vomiting and more or less collapse. On several occasions he had passed small gall-stones.

About ten weeks before I saw him he was seized with an attack, which did not, as usual, yield to morphia; the liver became enlarged and tender; there was a great amount of flatulence and acidity, and a feeling of discomfort generally. After this seizure he had ague-like attacks and jaundice of varying intensity, and from that time a tumor steadily developed in the epigastric and right hypochondriac regions. He rapidly lost flesh and strength, and when he was taken into a surgical home for operation he was so feeble and emaciated that it was questionable whether he would be strong enough to bear it. Jaundice was well-marked and the tumor in the upper abdomen, which was tense, tender and fluctuating, was still enlarging. He had had diarrhea six times a day for several days before admission, and the motions were bulky and pale and contained fat.

The urinary pancreatic reaction was well-marked. Just before operation he vomited clear fluid, not containing bile. Operation was performed on April 5th, 1902, when a pancreatic cyst was exposed between the stomach and colon, containing four pints of straw-colored fluid. Inside the cyst was found a mottled black slough with grey patches, two and a half to three inches long by one and one-quarter inches broad, and one-half inch thick, evidently pancreas. (See photographs XVII. and XVIII.) The gall-bladder and ducts contained thirty stones, two the size of walnuts; one of these was found at the junction of the cystic and common duct, and pressing on the latter. The cyst of the pancreas and the gall-bladder were drained by separate tubes with the stomach and the first part of the duodenum between them. On being put back to bed the patient was quiet, but vomited frequently. He made a steady recovery without any untoward symptoms and left for home on May 2nd, 1903. On March 3rd, 1904, the patient was the picture of health and had gained one and one-half stones in weight. He told me that the gall-bladder opening had closed in six weeks and the pancreatic fistula in nine weeks.

*Symptomatology.*—It is quite unnecessary for me to give the ordinary symptomatology of cholelithiasis, or of pancreatitis in its various forms, as I have done that elsewhere, but it may reasonably be asked, How can it be told when catarrhal or interstitial inflammation of the pancreas has supervened on cholelithiasis? So long as the concretions remain in the gall-bladder or cystic duct it is extremely unlikely that the pancreas will participate in the cholecystitis, unless the pancreatic duct has become infected at the same time as the bile ducts.

As soon as gall-stones pass into the common duct, even if they are not long detained in it, a catarrhal or even a parenchymatous pancreatitis may supervene, but if the gall-stone remains in the pancreatic or interparietal portion of the common duct, setting up infective cholangitis, a pancreatitis is almost certain to occur.

The symptoms of pancreatic catarrh, passing on to interstitial pancreatitis, vary according to the cause; for instance, if it be due to gall-stones, there will be a history of painful attacks in the right hypochondrium and epigastrium, associated with jaundice, and possibly accompanied by fever of an intermittent type often resembling ague. Tenderness at the epigastrium, with some fulness above the umbilicus, will usually be noticed: loss of flesh soon becomes marked, and if the pancreatic symptoms predominate, the pain will pass from the epigastrium

round the left side or even to the renal and scapular regions. Fat and muscle fibres may be noticed in the motions as soon as the obstruction to Wirsung's duct is complete, and the pancreatic reaction will be found in the urine. If gall-stones be not the cause, there may be merely an aching, or painful attacks not at all pronounced, or the symptoms may come on painlessly, associated with dyspepsia, and with slight jaundice soon becoming more marked. In such cases, if the swollen pancreas tightly embraces the common bile duct the gall-bladder may dilate and give rise to a suspicion of cancer of the pancreas, which the rapid loss of flesh will tend to confirm. In the latter stages pale or white and bulky motions may be passed and a hemorrhagic tendency may be noticed. The liver is usually enlarged when the common bile duct is tightly gripped, and in several cases I have found cirrhosis of the liver, doubtless due to the long-continued stagnation of septic bile in the ducts. I have seen well-marked enlargement of the spleen on four occasions. In one patient the fever and the enlarged spleen gave rise to a suspicion of ague, the organisms of which were said to have been found in the blood, and on several occasions the repeated rigors have led to the diagnosis of malarial fever.

In 60 per cent. bile was present in the urine. In 40 per cent. calcium oxalate crystals were found. In 4 per cent. the oxalate crystals were associated with bile. In none of my cases was glycosuria found, though in two cases it developed several years later. Opie reports having found glycosuria in one out of twenty-two cases. Glycosuria only occurs as a very late symptom. Death may occur from asthenia, due to long-continued jaundice, or from some intercurrent disease, predisposed to by the loss of flesh and debility.

The symptoms of pancreatitis may be conveniently classified under (1) digestive symptoms, (2) physical signs, (3) metabolic symptoms, (4) symptoms artificially produced.

1. *Digestive Symptoms:* (a) Steatorrhea or fatty stools, (b) azotorrhea or faulty digestion of albuminous foods, (c) sialorrhea, (d) diarrhea, (e) dyspeptic disturbances, (f) emaciation, (g) nausea and vomiting.

2. *Physical Signs:* (a) Presence of swelling or tumor, (b) fever, (c) pain and tenderness with muscular resistance, (d) pressure on adjacent organs, (e) hemorrhage, (f) jaundice, (g) fat necrosis (evident only when the abdomen is opened).

3. *Metabolic Symptoms:* (a) Glycosuria, (b) other urinary changes.

4. *Special Symptoms Obtained by Artificial Means:* (a) Micturition glycosuria, (b) Sahli's symptom.

I am sorry that the time at my disposal will not allow me to dwell on these symptoms individually, but as I have recently done so in my Hunterian lectures, which can be seen in the *Lancet* for March 19th and 26th, and April 2nd, 1904, I need only now refer to them collectively. I would at once say that no single symptom alone will justify the diagnosis of pancreatic disease, but with such a number of symptoms and signs as those I have related, it is a mystery to me how the idea has gained so firm a hold that pancreatic diseases are, as a rule, undiagnosable. For instance, Opie only last year wrote: "Disease of the pancreas is rarely recognized during life," which is a reproach that I hope will in future have no justification. Although in any single case we may not have all the symptoms and signs that I have mentioned, yet in no case ought we to fail to find digestive or metabolic or physical signs if disease of the pancreas be present. Different diseases of the pancreas, it will be seen, as one would expect, present very various grouping of symptoms, but in nearly every, if not in every, case since Dr. Cummidge and I have been working together at the subject, we have found most valuable help from the urinary pancreatic reaction. Although we must not yet say that this sign is absolutely pathognomonic, yet it is safe to make this assertion, that if the test be skilfully carried out it affords most valuable positive or negative evidence, when taken with other symptoms, in not only establishing the presence or absence of some disease of the pancreas, but in assisting in the differentiation of simple from malignant disease, a most important matter when surgical treatment is in question.

For the significance of the urinary test, and for the somewhat complicated and elaborate method of carrying it out, full details will be found in the Arris and Gale lecture, published in the *Lancet* for March 14th, 1904.

*Treatment.*—The treatment of catarrhal inflammation of the pancreas and of chronic interstitial pancreatitis will at first be by general and medical means aiming at the cause, whether that be gall-stones, pancreatic calculi, duodenal catarrh, gastric ulcer, alcoholism or syphilis; but if, after a fair trial of medical treatment not too long continued, the jaundice and loss of weight continue, and the signs of failure in pancreatic digestion and metabolism are manifesting themselves, the question of surgical treatment should be seriously considered, for the condition is one that if not relieved early will certainly lead to serious degen-

eration of the gland or become dangerous to life in other ways. When operation is undertaken before the process has advanced to well marked interstitial pancreatitis, my experience is that complete cure is effected in a very great proportion of cases, but if interstitial inflammation has become well-marked and has advanced either to the interacinar form or to cirrhosis, an arrest of the process is all that can be looked for. As proof of this statement, in some of my own cases, apparently well several years after operation, a pancreatic reaction can yet be obtained in the urine, while in two cases glycosuria has developed; thus showing that inflammation of the pancreas, if at all advanced, leaves abiding changes, and the sooner the morbid process is checked the less likelihood there will be of a permanently deficient metabolism.

Surgical treatment will vary according to the cause and the symptoms. Where there is evidence of obstruction, whether in the pancreatic or common bile ducts, the cause in the greater number of cases, twenty-seven as compared with twenty-four, will prove to be concretions which should, if possible, be removed, and, as proved by my experience in this class of cases, the hope of cure or of great relief is very promising.

Not only is it desirable to remove the cause of obstruction, but at the same time the bile ducts should be drained, either by means of cholecystotomy or cholecystenterostomy. Where no obstruction in the shape of gall-stones or pancreatic calculi can be found, I would still advise drainage of the bile ducts by one of these operations. It has been argued that it is difficult to comprehend how drainage can do good in these cases; for proof of its efficiency I would appeal to the list of examples that I have given and to the after history of the cases which I have operated upon. The drainage of the bile ducts acts, not only by removing one source of irritation in the shape of infected bile, but at the same time it relieves tension and allows the infected pancreatic secretion to escape, besides also freeing the blood from a poison which seriously damages it and the system at large. Besides the beneficial effects of drainage, in many of the cases the cause of obstruction is also removed. Whether advanced chronic interstitial pancreatitis will be completely cured by operation, it is difficult to say, for in some of the severer cases a pancreatic reaction is found long after operation and after all other symptoms have cleared up, but in several cases that have been tested years after operation, the pancreatic reaction has entirely disappeared, thus apparently proving that the case is cured. Moreover, I suspect that the operation arrests

the process of disorganization, even if it cannot alter the changes that have already occurred. Doubtless, in some the disease was a catarrhal inflammation of the pancreas, which was arrested either before interstitial inflammation had actually developed or before it had advanced too far, and probably in none of the cases had the interstitial change advanced so far as to become interacinar or to present the advanced stage of atrophy or cirrhosis, as in none of the cases was sugar present in the urine at the time of operation, though the metabolic functions of the pancreas were impaired, as shown by the presence of the pancreatic reaction, and the digestive functions were affected, as shown by the condition of the feces.

Whenever the pancreas is involved, either in catarrh or in chronic inflammation, the surgeon must be prepared to do a thorough operation for exposure of the whole length of the common duct, as well as the head of the pancreas. I trust that I shall be pardoned if I give in detail the operation which I have been accustomed to perform, and which I have found both convenient and efficient.

*Details of Operation.*—I have been able to modify the operation for exploring the head of the pancreas and the common bile duct in such a way that what was formerly a most difficult procedure, involved prolonged manipulation, special appliances and at least two assistants, is now a comparatively simple operation, in the greater number of cases only requiring the help of one assistant and not requiring the use of any special apparatus. By this method the time involved in the operation is reduced considerably, and where adhesions do not give unusual trouble it is easy to complete the work in from thirty to forty minutes, which not only means a saving of time and fatigue to the operator, but a considerable saving of shock to the patient. I always employ a firm sandbag under the back opposite to the liver, which not only pushes the spine, and with it the pancreas and common duct, forward, but acts like the Trendelenburg position in pelvic surgery, by letting the viscera fall away from the field of operation. I then make a vertical incision over the middle of the right rectus, the fibres of which are separated by the finger, which I find to be the most expeditious and the most effective method of exposing the gall-bladder and bile ducts, but when it is necessary to open either the common duct or the deeper part of the cystic duct, instead of prolonging the incision downwards, as was formerly done, I now carry it upwards in the interval between the ensiform cartilage and the right costal

margin as high as possible, thus exposing the upper portion of the liver very freely. It will now be found that by lifting the lower border of the liver in bulk (if needful, first drawing the organ downwards from under cover of the ribs) the whole of the gall-bladder and the cystic and common ducts are brought close to the surface, and as the gall-bladder is usually strong enough to bear traction, the assistant can take hold of it by fingers or forceps and by gentle traction can keep the parts well exposed, at the same time that, by means of his left hand, with a flat sponge under it, he retracts the left side of the wound and the viscera, which would otherwise fall over the common duct and impede the view. It will now be observed that instead of the gall-bladder and cystic duct making a considerable angle with the common duct, an almost straight passage is found from the opening in the gall-bladder to the entrance of the bile duct into the duodenum, and if adhesions have been thoroughly separated, as they should always be, the surgeon has immediately under his eye the whole length of the ducts, with the head of the pancreas and the duodenum. So complete is the exposure that, if needful, the peritoneum can be incised and the common duct separated from the structures in the free border of the lesser omentum, but this is not necessary except where a growth has to be excised. The surgeon, whose hands are both free, can now with his left finger and thumb so manipulate the common duct as to render prominent any concretions which can be cut down on directly, the edges of the opening in the duct being caught by pressure forceps. The assistant can now take hold of the forceps with his left hand, as that instrument, with the sponge, will form a sufficient retractor, since the duct is so near the surface. When the duct is incised there is usually a free flow of bile, which it must be remembered is infective, but a sponge in the kidney pouch and the rapid mopping up of bile as it flows by means of sterilized gauze pads, avoid any soiling of the surrounding parts, and if thought necessary the bulk of the infected bile can be drawn off by the aspirator either from the gall-bladder or from the common duct above the obstruction before the incision into the duct is made. After removing all obvious concretions, the fingers are passed behind the duodenum and along the course of the hepatic ducts to feel if other gall-stones are hidden there, and a gall-stone scoop, the only special instrument that I use, is passed up into the primary division of the hepatic duct in the liver and quite down to the duodenal orifice of the common bile duct, and to ensure the opening into the duodenum being patent, a long probe is passed into the bowel. The incision

into the bile duct is now closed by an ordinary curved round needle held in the fingers without any needle-holder, a continuous catgut suture being used for the margins of the duct proper, and a continuous fine green catgut or spun celluloid thread being employed to close the peritoneal edges of the gut. In such cases where the pancreas is indurated and swollen from chronic pancreatitis, and is likely to exert pressure on the common duct for a time, I insert a drainage tube directly into the duct and close the opening around it by a purse-string suture, the tube being fixed into the opening by a catgut stitch which will hold for about a week, but where this is not done I usually fix a drainage tube into the fundus of the gall-bladder in the same way, as this drains away all infected bile and avoids pressure on the newly sutured opening in the duct.

So easy is it to remove impacted stones after this method of exposure, that I now never spend a long time in manipulating stones impacted either in the cystic or common duct, but at once incise the duct, remove the concretions, and close the opening without damaging the duct by prolonged manipulation. Although there is seldom any fear of leakage or of infection, yet owing to the separation of extensive adhesions there is usually some tendency to pouring out of fluid in the first twenty-four hours. I therefore generally insert a gauze drain through a split drainage tube, bringing it out by the side of the gall-bladder drain. The wound is closed in the usual way by continuous catgut sutures, first to the peritoneum and deep rectus sheath, next to the anterior rectus sheath, and lastly to the skin. Even in acute or subacute, as well as in chronic pancreatitis, this method is advantageous, as at the same time that the pancreas is exposed the bile ducts can be explored, and if the cause be gall-stones they can be removed. Should it be necessary to expose the under surfaces of the pancreas an extension of the incision downwards gives enough room to raise the transverse colon and to get directly at the body of the pancreas through the transverse meso-colon.

To those having little experience in this operation the modifications which I have employed may seem trivial, but to those who have experienced the difficulties of the ordinary operation I feel sure that the method which I have described, which enables the pancreas and the whole of the bile passages to be dealt with close to the surface, will be sufficiently appreciated. But the technique of the operation is not the only important part of the treatment of these serious cases, which require thought and

care, not only before and at the time of, but subsequently to, operation.

A careful study of the causes of mortality in operations on the common duct, associated with jaundice and pancreatitis, shows that the hemorrhage, either immediate, consecutive or secondary, cannot be ignored as a danger, and that shock, apart from hemorrhage, has next to claim our attention. Sepsis is no longer the bugbear that it used to be, thanks to a rigid all-round sepsis, the employment of gauze drainage, and the careful avoidance of soiling the wound by infected bile. Although there is a greater tendency to bleeding in chronic jaundice from pancreatic disease than when jaundice is due to gall-stone obstruction, I think there can be no doubt that in all cholemic conditions the blood becomes so altered that the coagulability becomes seriously diminished, and that these features demand serious attention before any operation is undertaken in cases of common duct cholelithiasis.

I now always employ chloride of calcium in the case of jaundiced patients, both before operation in thirty grain doses by the mouth, and afterwards in sixty grain doses by the rectum, twice or thrice daily for several days.

I think it is important to ligature all bleeding points and not to trust simply to forcipressure, and while in non-jaundiced patients adhesions may be simply separated, in these cases I prefer to divide adhesions between ligatures where practicable. Where there is persistent oozing of blood from innumerable points, a tampon of sterilized gauze forms a useful means of hemostasis, and this may be made more efficient by employing at the same time a solution of suprarenal extract to the bleeding surfaces.

The best treatment of shock is preventive, and to that end it is desirable to lose as little blood as possible, though I do not agree with those who assert that shock in operation is always dependent on loss of blood.

The patient is enveloped in a roughly-made suit of gamgee tissue, and where he is very feeble, or the operation is likely to be prolonged, it is performed on a heated table. A large enema of normal saline solution, with or without stimulant, given from fifteen to twenty minutes before, and the administration of from five to ten minims of solution of strychnia subcutaneously just before commencing anesthesia, are useful. Expedition in operating is an important factor in lessening shock, especially in abdominal surgery, for it stands to reason that prolonged manipulation and exposure of the viscera in

patients so ill as are those composing the class of cases which we are now considering must generally be, will be ~~badly~~ ~~long~~, for it is not only the work of the surgeon but the deep anesthesia that adds to the shock, since for the operation to be well and expeditiously performed the muscles must be thoroughly relaxed.

After the operation, a pint of saline fluid with one ounce of brandy is given by enema, and five minims of solution of strichnia are given subcutaneously in two hours and repeated if desirable.

Subcutaneous injections of saline fluid or intravenous infusion are only rarely required.

*Statistics.*—In order to ascertain the after results of the operations, letters were recently addressed to the friends or medical attendants of all the patients who had not been recently heard of. In one case, where the cause was due to pancreatic calculi, these were removed both from Wirsung's and Santorini's ducts with complete recovery, and the patient is now well. In twenty-seven cases of catarrhal or interstitial pancreatitis, where gall-stones were found obstructing the pancreatic portion of the common duct, choledochotomy in nineteen, cholecystotomy in five, and cholecystenterostomy in three were followed not only by immediate recovery, but, as ascertained by recent reports, the patients are now well, except one who has since died from acute bronchitis; one who, twelve months later, died from cirrhosis of the liver, and one who, eight and a half years subsequently to operation, is apparently well, though sugar has recently been found in the urine. In twenty-four cases, where obstruction to the common bile duct was due to an inflammatory condition of the pancreas compressing the bile duct, though probably in many of the cases originally due to gall-stones, yet where gall-stones were not actually present at the time of operation, the bile ducts, and thus indirectly the pancreatic ducts, were drained, in twelve cases by simple cholecystotomy, and in nine by cholecystenterostomy; in three cases adhesions were separated and no drainage of bile ducts was performed. Of these twenty-four cases twenty-two recovered.

Two out of fifty-one patients died as a direct result of the operation: one, a cholecystotomy undertaken in a patient reduced to the last stage of exhaustion before a surgical opinion was sought and where at the necropsy a cirrhotic condition of the head of the pancreas was found, and a second, in which a cholecystenterostomy was undertaken in the presence of adhe-

sions that appeared too formidable to deal with considering the poor condition of the patient, who succumbed a few hours later. In this case necropsy revealed a stone in the pancreatic portion of the common duct which would have been discovered had the patient's condition permitted a thorough exploration. From four, the letters were returned as "Gone; no address." The remaining sixteen completely recovered. Of three patients in whom the pancreas was found enlarged at operation, nothing beyond separation of adhesions and manipulation being done, all recovered. In one of these cases glycosuria has supervened and is still present, though the patient seems to be well. The after history of one cannot be traced. Of the third, word has been received to say that she is well fourteen years after operation.

Thus I have no hesitation in advocating operation in this class of cases after general and medical means have had a fair, but not too long, a trial, and the results I have given will, I think, justify my conclusions. A search through the literature of the subject has revealed the facts that (apart from my own cases, fifty-one in number, with two deaths, or a mortality of 3.9 per cent.) there have been sixty-two operations for chronic pancreatitis recorded, of which eight died, yielding a rate of mortality of 12.9 per cent. These cases have all been verified for me independently.

The subacute form of pancreatitis is more amenable to treatment than the acute, as the indications are so much more definite and there is more time for careful consideration. Though it has usually only been attacked when an abscess has formed, and is manifestly making its way to the surface, yet there is no reason why in some cases surgical treatment should not be adopted at an earlier stage. As in the acute condition, morphine may be required to relieve the pain and lessen the collapse. Distension, if present, demands attention, and may have to be relieved by lavage of the stomach and turpentine enemata, or by the administration of calomel by the mouth. Calomel is also of benefit as an intestinal antiseptic, for which purpose it may be given in small, repeated doses, followed by a saline aperient. As soon as the constipation is relieved, diarrhea is apt to supervene, when salol and bismuth, with small doses of opium, may be given. If surgical treatment is decided on, an incision through the upper part of the right rectus will not only be useful for exploring the bile passages and removing any concretions, but will also enable the operator to palpate the pancreas and to locate any incipient collection of pus, which, if practic-

able, should then be evacuated by a posterior incision in the left or right costo-vertebral angle. If the posterior incision be thought impracticable, the collection of pus may be removed by aspiration and the cavity opened and packed with gauze, which may be brought forwards through a large rubber tube, which procedure will, in the course of from twenty-four to forty-eight hours, establish a track isolated from the general peritoneal cavity. In abscess of the pancreas, which usually assumes the form of subacute pancreatitis, and which we must distinguish from the acute suppurative pancreatitis where the pus is diffused through the gland, or where the abscesses are small and multiple, the suppurating process is limited by a pouring out of lymph, so that should the patient survive the initial more acute stage, and discovery of the pus-containing cavity be made, the condition is one decidedly amenable to treatment by drainage. The anatomical relations will readily explain the course along which the pus burrows, should it burst through its lymph barriers—for instance, in one case I was able to evacuate an abscess from the right loin in a young man, aged twenty-four years, that had been mistaken for a perineal abscess, yet the kidney was quite healthy and the grumous pus had come from the pancreas and had passed behind the peritoneum, covering the second part of the duodenum. The patient recovered completely. In another case I opened the abscess in the left iliac region that had apparently started from the body of the pancreas and which had burrowed in the same way behind the peritoneum. The patient recovered from the operation, but developed trouble in the left side of the thorax and died suddenly several weeks later. In one case of acute suppurative pancreatitis the abscess was subphrenic, and was evacuated by an epigastric incision to the left of the mid-line; unfortunately the patient was too ill to bear a prolonged operation, otherwise I should have drained from the left loin, which might possibly have saved the patient. In another, where the symptoms were rather acute and the patient was extremely ill, I discovered pus between the liver and the stomach, and, although drainage was apparently complete, the patient succumbed in a few days to exhaustion due to the septic process that had been initiated before the abscess was opened. In two other cases, the sequence of suppurative catarrh, I successfully drained abscesses of the pancreas through a tube in the common bile duct after removing the gall-stones which had obstructed Wirsung's duct. In one of these cases, the patient, a woman aged seventy-two years, remains quite well; and in the other, a man aged forty years, recovered from the opera-

tion, but three months afterwards died from exhaustion, and at the necropsy the empty abscess cavity was discovered in the head of the pancreas, the rest of the gland being affected with chronic interstitial inflammation. In one of my cases, in a man aged thirty-five years, a pancreatic abscess burst into the stomach, setting up acute gastritis, the condition being proved by an exploratory operation. It was treated by gastro-enterostomy to drain away the foul stomach contents. The patient is now quite well, four years later. In another case, a young married woman aged twenty-six years, the abscess apparently burst into the bowel, and although recovery was tardy, she ultimately got quite well without operation. The diagnosis was made from the symptoms and by an examination of the swollen pancreas under an anesthetic, and subsequently by the presence of a pancreatic reaction in the urine. It is important in these cases to see that the cause is removed, if that be possible—for instance, gall-stones or pancreatic calculi—so that if recovery occurs there may be nothing left to lead to a recurrence of the trouble.

It will thus be seen that I have had eight cases of abscess of the pancreas under my care, one of which was complicated by acute hemorrhagic pancreatitis. Six were operated on, with recovery in five, although in one of the cases the relief was only for a few weeks' and in another for a few months. In the eighth case, which was not operated on, the abscess burst into the bowel and was discharged, the diagnosis having been made by an examination of the tumor under an anesthetic, by the presence of digestive symptoms, and by the discovery of the pancreatic reaction. When inflammation of the pancreas has ended in abscess, chronic interstitial pancreatitis will also probably be present, as was shown at the necropsy of one of my cases that died some months subsequently. It is possible that in some cases the interstitial change may be local, though in others it may be general, and may then lead to atrophy of the gland and to glycosuria. A search through literature reveals a considerable number of pyemic abscesses of the pancreas, but those resulting from subacute pancreatitis are not common. Besides my own seven operations for abscess of the pancreas, with two deaths, there have been seven others recorded, with three deaths. Thus of fourteen cases, five died, giving a mortality of 36.6 per cent.

*Treatment of Acute Pancreatitis.*—The pain at the onset is so acute as to necessitate the administration of morphine, and the collapse will probably demand stimulants, which, on account

of the associated vomiting, may have to be given by enema. In the early stages the symptoms may be so indefinite that the indications for surgical treatment are often not clear enough to warrant operation. But as soon as acute pancreatitis is proved, as it may be by the combination of symptoms, together with the urinary test, the surgeon must not wait until the collapse has passed off, as that may be dependent on septic absorption, which can only be relieved by operation. The simulation of intestinal obstruction will probably lead to efforts to secure an evacuation of the bowels and relief to the distension. Just as in perforative or gangrenous appendicitis, an early evacuation of the septic matter is necessary to recovery, so in this equally lethal affection, an early exploration from the front, either through the right rectus, for reasons stated previously, or through the middle line above the umbilicus, or from behind, through the left costo-vertebral angle is indicated in order, if possible, to relieve tension, to evacuate septic material, to secure free drainage and to arrest the hemorrhage which leads to disintegration and necrosis of the pancreas. The after treatment will be chiefly directed to combating shock and keeping up the strength until the materies morbi, both local and general, can be thrown off. Even if no pus be found, no harm should accrue by such an exploration, which can be made in a few minutes through a very small incision in the middle line above the umbilicus, if necessary with the aid of cocaine. After establishing the diagnosis by the discovery of fat necrosis, a posterior incision in the left costo-vertebral angle will not only enable the diseased organ to be very freely examined, and if necessary drained for the evacuation of pus and gangrenous material, but will also secure free drainage of the lesser peritoneal sac. If, however, the inflammatory collection of the tensely distended and inflamed gland be incised from the front, as is advisable in certain cases, gauze packing and gauze drainage may usually be relied on to prevent general infection of the peritoneum. If there are signs of obstructed common duct the gall-bladder should also be drained, and if gall-stones are discovered they should be removed, if this can be done without seriously adding to the length of the operation or imperilling life by adding to the shock, otherwise they may be left and removed on a subsequent occasion if free drainage of the bile passages can be secured. I have had seven cases of acute pancreatitis under my care and have operated on five, three of which recovered. Of the two cases where operation was not consented to, and where medical treatment alone was carried out, death occurred

in the first case on the third day, and in the second case after a week's illness, attended in both with great pain and incessant vomiting.

I have already described a case of gangrenous pancreatitis in a man, aged fifty-eight years, in which I was able to open a collection of fluid through the great omentum above the hepatic flexure of the colon and to extract a slough of the pancreas, and at the same time to drain the gall-bladder and remove all gall-stones, recovery being ultimately complete.

In another case, in a middle-aged man run down by over-work, but who was otherwise healthy, a sudden, severe epigastric pain was followed by high fever, rigors, epigastric swelling and obstruction of the common duct. Abdominal distension, chiefly of the upper part, and an ill-defined epigastric tumor pointed to the pancreas, and fat in the motions, with the pancreatic reaction in the urine confirmed the diagnosis of pancreatitis.

As there had been a previous history of gall-stones, the question of common duct cholelithiasis as a cause was thought probable.

Exploration revealed a considerable tumefaction of the whole length of the pancreas, but especially of the head of the gland. Omental and visceral adhesions, together with the extreme illness of the patient, rendered a careful examination impossible, and as the gall-bladder was acutely inflamed and distended, cholecystotomy was performed. Within the next twenty-four hours nearly two pints of muco-purulent material tinged with bile escaped. No gall-stones were felt. The patient recovered and is now well.

In another case of a young married woman suffering from acute suppurative pancreatitis, the viscera were found hopelessly matted together. There was extensive fat necrosis all over the abdomen. I evacuated a subphrenic abscess containing masses of necrosed fat and dark, slate-colored pus. The patient was only temporarily relieved, and succumbed on the third day.

In this case I think I ought to have drained through the costo-spinal angle on the left side as well as from the front, but the patient was so ill that I feared to do more lest death should occur on the table.

In case of traumatic hemorrhage pancreatitis in a man, aged twenty-eight years, on whom I operated, drainage through the loin, as well as in front, was adopted, but did not save life, as at the time of operation peritonitis was already advanced.

In another case of a middle-aged medical man, the diffuse fat necrosis and adhesions of the viscera and omentum into a dense mass, presented a formidable obstacle to complete exploration, but as no evidence of any collection of fluid either in the pancreas or in the lesser peritoneal sac could be obtained, and as no gall-stones could be felt either in the gall-bladder or bile ducts, I simply performed the peritoneal toilet and closed the abdomen, recovery following and ending in complete restoration to health. It is worthy of note that in this case the diagnosis was confirmed before operation by the urinary pancreatic reaction.

A case was reported by Dr. Chas. D. Muspratt, of a woman, aged forty years, who had been admitted to the Royal Victoria Hospital, Bournemouth, on December 3rd, 1903, in a state of collapse, and suffering from severe abdominal pain, with incessant vomiting. The abdomen was opened within twenty-four hours of the onset of acute symptoms, and the omentum and intestines in the neighborhood of the pancreas were found deeply blood-stained with numerous spots of fat necrosis. The pancreas was almost purple, and extremely tense. An incision was made into the dark gland, and very free bleeding followed, which was arrested by ligature. Gauze drainage was employed, and complete recovery followed. This is apparently the first case in which direct incision of the pancreas has been adopted, and the operator is to be congratulated, not only on having the strength of his convictions in treating acute hemorrhagic pancreatitis on the lines of other phlegmonous inflammations, but on the success of such treatment.

In a case reported by von Mikulicz, in 1903, a patient under the care of Dr. C. B. Porter, of Boston, was operated on by a deep incision into the inflamed gland, with an excellent result. This is apparently the second case in which the pancreas was deliberately incised during acute inflammation, with a successful result. Woolsey (*Annals of Surgery*, November, 1903) gives a summary of three cases of this affection successfully dealt with by laparotomy and drainage. The first two cases were operated on in the early stage—the first on the third day, and the second twelve hours after the onset. The first case was a hemorrhagic one and showed fat necrosis, the second case showed no fat necrosis nor bloody fluid, but the latter appeared on the removal of the gauze drain two days after the operation. In the third case there was marked but temporary glycosuria.

Dr. C. G. Kempe, of Salisbury, on December 11th, 1902,

excised a portion of the head of the pancreas affected with acute hemorrhagic pancreatitis. It was done within two hours of the onset of hemorrhage. The patient, unfortunately, died from diarrhea fifteen days later.

The argument that the mortality will be less if the surgeon waits for the formation of a local abscess is fallacious, as it takes no consideration of the large percentage of those who die before such a favorable result is presented, and in the second place many patients never develop a local abscess, the process being diffuse from the onset. The high mortality of an early operation in acute cases is due to the fact that in many of these fatal instances intestinal obstruction was suspected, and the collapsed patients were subjected to a prolonged search for the seat of the supposed lesion. Of fifty-nine reported cases of operation during the acute stage, twenty-three recovered; these include my own cases and those just referred to. Although this is a large mortality, it must be borne in mind that the disease is a lethal one and usually ends in death if not treated surgically.

The lessons which one may learn from recorded cases are not to wait until the system is over-weighted with absorbed poison before operating, and not to spend too long a time over the operation.

In conclusion, if we were to base our opinions on the post-mortem records of the past, inflammatory affections of the pancreas would have to be considered among the rarest of diseases, but recent clinical observations and operative experience show that such conclusions would be far from accurate, and I think I have been able to demonstrate, both from my own and from the experience of others, that inflammatory affections of the pancreas or its ducts are very much more common than is generally supposed. Fortunately, in showing the frequency of pancreatitis, and the very serious nature of the acute, subacute and chronic varieties of the disease, I have been able to demonstrate that we can do very much for these patients by timely surgical intervention. But I want to convince my audience that if only we can have the assistance and support of our medical colleagues, nearly all the cases forming the subject of my address to-day (that is, pancreatitis due to gall-stones) may be prevented by timely interference, and that with barely 1 per cent. of risk.

We know that gall-stones may exist in the gall-bladder without causing any trouble, and without giving notice of their presence, but as soon as they pass into the cystic duct, or as

soon as they begin to produce catarrh, they fortunately give ample evidence of their presence.

Were the concretions removed in that stage there should be no mortality, and as can be proved both by my own personal experience in several hundreds of cases, and by the experience of other operators of large experience in this line of work, the operative treatment of cholelithiasis undertaken before the onset of deep jaundice and infection of the bile and pancreatic ducts, is, with due care and in skilful hands, almost devoid of danger.

Hence, in advising surgical treatment of gall-stones at an early period, I am advocating a truly beneficent procedure which would prevent the occurrence of many of those truly serious cases of pancreatitis that cause danger to life.

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## SOME CASES ILLUSTRATING DIFFICULTIES IN THE DIAGNOSIS AND TREATMENT OF TUMORS.\*

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BY WM. OLDRIDGE, M.A., M.D.,

Surgeon to St. Michael's Hospital; Professor of Hygiene and Anatomy of the Faculty of Medicine in the University of Toronto.

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The cases to be presented are from various regions in the domain of general surgery, but most of them happen to be abdominal.

Most persons are aware that the best training for the meeting of difficulties and successfully dealing with them is to have met with difficulties and to have followed up the solution of them either alone or with others; furthermore, if the difficulty and its solution are presented to the same *coup d'oeil*, we do not get as good a training, as great a benefit, as if the difficulty "give us pause," and we have to work out the puzzle before getting the answer. It, therefore, seems to me that it is a useful exercise for us to accompany each other in the clinical examination of cases, the peculiar treatment of them, the *pros* and *cons* of diagnosis and treatment, as they occurred to us at the time, and in the observation of the results. Taking my turn, I shall endeavor to give such historical sketches of some cases occurring within the last four months.

\*Read before the Ontario Medical Association, June, 1904.

Case 1.—Mrs. —, aged forty-seven, nullipara, living with her husband, was seen with Dr. M. Wallace on the night of February 16th last. About three weeks previously she was in a store, and was seized with sudden, sharp pain in the right iliac fossa, so severe that she had to sit down, her pallor and faintness being noticed by the employees.

She was attended by another practitioner before Dr. Wallace was called in. During the period of attendance by both these gentlemen there was high temperature and pain, both varying in degree. The diagnosis had been involved in obscurity, the tenderness, at first in the right side, and the continuous high temperature, caused the practitioners to interrogate the case for typhoid and to have the Widal test made (with negative result). Before I saw her the pain had made itself very manifest in the left iliac fossa, as also a tense tumor, the upper edge of a mass being felt as high as the anterior superior spinous process of the ilium and a little beyond the middle line; it did not give fluctuation either per vaginam or in the abdominal wall. I suppose I must incur the reprobation of some of my brethren by not sharing an indiscriminate horror of the sound; I will join with them in emphasizing the wrongness of using it when there is any danger of conveying infection into the endometrium or of employing undue force to cause its entry into the canal; but it is of value for diagnostic purposes when used with proper provisos and precautions. In this case the vagina was clean, and having sterilized the sound in a flame and soaked my hands in mercuric bichloride solution, I introduced two fingers of my left hand so that the os was between their tips, and passed the sound along the interspace, and by easy, forceless manipulation introduced the sound, and thereby found that the uterus lay on the right side of the mass, somewhat anterior and superficial to it. The mass was pressing firmly down on the vaginal vault.

We are now confronted with the question of differential diagnosis. The three conditions which most readily suggest themselves are extra-uterine pregnancy, hematocele, pelvic abscess; two less likely, but possible, are ovarian tumor with suddenly twisted pedicle, and pus tube. Against this last are the sudden onset and the size. The largest pus tube I have as yet seen is one of a pair I removed some years ago, about twice the diameter and twice the length of the normal unimpregnated uterus. The symptoms, as a rule, come on slowly. Had an ovarian tumor attained a size sufficient to cause sudden pain from rotation and twisting of its pedicle, it would have been detected. Next, what about hematocele or extra-uterine pregnancy; the sudden pain

and the menstrual phenomena are suggestive; as to the pain occurring on both sides, I have had five cases where I have found mischief on both sides, and have had to tie off and remove the appendages on both, all, I am thankful to say, recovering; and in three of these there was high temperature. Regarding pelvic abscess there was nothing to contraindicate its probability except the sudden onset of the symptoms.

The imperative necessity of operation without delay was impressed upon the patient, and she left the hotel for St. Michael's Hospital. The double preparation having been made, the patient was anesthetized. Although the probability of extra-uterine pregnancy or hematocoele was greater than that of pelvic abscess, yet remembering the possibility of the latter, and finding that there was no intervening space between the vaginal vault and the wall of the mass, I determined to adopt the precaution of using the aspirating needle, selecting a prominent spot about three or four centimetres to the left and slightly posterior to the os. The result was that I got pus. Keeping the needle in position, I slid a narrow-bladed knife along it, with its edge looking inwards and forwards as the safest direction; pus now coming freely along the knife blade, the needle was withdrawn, and a pair of hemostatic forceps was introduced along the flat of the knife, and the forceps blades were separated to a sufficient extent to allow of the introduction of two pieces of drainage tube, about as thick as one's little finger, these being fastened to the opening by a looped knot. About fifty ounces of foul-smelling pus escaped, and the cavity was washed out. Saline solution was used for many days, and not any irrigant, which might prove injurious if absorbed or retained.

Only such details need be given as may be of service in a like obstinate case, such as the strengths of solutions, not given in detail in our text-books, and suggestions dealing with complicating difficulties which arose. After some time the opening became so contracted that the introduction of any instrument to wash out was painful. The patient was again anesthetized, the tough cicatrized mucous membrane divided with a knife, and the subjacent tissues by forceps, after Hilton's method, and by a cranial perforator, the edge of the latter being guarded towards the external lateral direction by a covering of absorbent cotton for fear of accident to the uterine artery or ureter. Having explored the cavity with a finger, I scraped and irrigated it as thoroughly as possible with a blunt curette, a narrow channel at the upper end not being opened up to admit the curette, for fear of making a passage through into

the cellular tissue. After a few days antiseptic and astringent douches were tentatively used, watching carefully for possible ill results and gradually making the solution stronger. Amongst these were mercuric bichloride, at first in the strength of 1 in 4,000 and in small quantity, gradually increased to 1 in 2,000, flushing; then formaldehyde, at first 1 in 1,500 and winding up with 1 in 600; then potassium permanganate, 1 drachm to the pint, zinc sulphate and boric acid, winding up with 2 drachms to the pint, as the cavity became contracted and its walls thicker; for one period the cavity was dried out and bismuth subiodide insufflated; the last applications were washing out with 2 per cent. carbolic, followed, sometimes, by tinct. benzoin co., and sometimes by the zinc astringent. I show you Polk's intrauterine applicator, a cannular tube introduced by means of an obturator, the tube being either used to introduce gauze through, or left in the opening for a day or two to enlarge it. The patient, having finally passed a probation of ten days without any tent or other drainage, and the cavity allowing the sound to pass in only about two centimetres, she went to the country the week before last with the hope and expectation that this will finish her cure.

The source of infection I do not know; was rupture of a small abscess or pus-sac (tubal it might be) the cause of the sudden pain, the primary symptoms not having been sufficient to attract attention? The patient seemed to be doubtful whether there had not been some pain and other disturbance before the onset of the pain above described.

Case 2.—Mrs. —, aged forty-two, multipara. I had previously done a hysterectomy for multiple fibroma on a relation of this patient; but for her case I am indebted to Dr. Wallace, who asked me to see her on the night of April 8th. Her youngest child is sixteen years old, and her menses having ceased she made a diagnosis for herself and inserted a hard rubber catheter into the os uteri. After this she had pains and chills, and sent for Dr. Wallace. Her temperature had varied in the ten days before I saw her from 98 to 104. In the interval between the consultation and arrangement for it she had improved. The bimanual examination revealed some tenderness about or above the cervix, the uterus being pushed over slightly to the right, indistinct fulness being felt in the left iliac fossa. The patient's condition improved for a few days, but she was worse on the 13th, and I saw her again; the above signs had increased, a soft, fluctuating mass, not tense, being discernible on the left side, notwithstanding muscular tension

and resistance. She was removed to the hospital that day to be ready for emergency; temperature came down to normal and so remained until the second day after, when we operated, opening the abdomen about three centimetres to the left of the median line by an incision extending from a point three centimetres below and to the left of the umbilicus to about the same distance from the os pubis, the incision being about eight centimetres long. A cyst in the broad ligament presented itself to view (see *a*, diagram *A*); about thirty ounces of clear semi-viscous fluid were removed by trocar and cannula; the interior of the cyst was examined, but no embryonal products were found; at the bottom of it and towards its inner border was seen a bulging in the surface, shown at point *b* in the diagram, about the size of a twenty-five cent piece; its greatest protrusion being about seven millimetres; it was deep down in the pelvis; its relation to



the uterus (*C*) being close to its left border about midway between the os and fundus. I decided not to explore the region subjacent to this protrusion until I had made all preparations to secure and dispose of the wall of the cyst and to be ready to deal with possible contamination or bleeding; this preparation consisted in securing the whole contour of the cyst-wall by interlocking ligatures, leaving the last ligature to be tied after entering an aspirating needle into the supposed cavity to be explored. The circle (*a*, diagram *B*) was at a distance of about three centimetres from the bulging bottom of the cavity, and the cyst wall was cut away about one centimetre from the ligatures, so that when the last ligature, still loose, should be tied, we would have a tube, the orifice of which would be sewed to the parietal peritoneum and abdominal wall in the same man-

ner as in the drainage of the gall-bladder; the length of the tube as above described was left so as to permit of this being done without undue dragging; and the orifice could be left large or made small by the extent to which the last ligature would be drawn. All being thus prepared, the aspirating needle was introduced at *v*, and a few drops of pus showed themselves in the piece of glass tubing between the needle and receiver. When this was perceived, the little cavity was carefully packed with gauze around the needle, the orifice was secured to the abdominal wall, and the wound in the latter closed, but not completely at this stage, loose sutures being left on the inner side, so that an assistant could pass his index finger down between the piece of sac-wall and the uterus, with its tip on the little pus cavity below close outside the point at which the

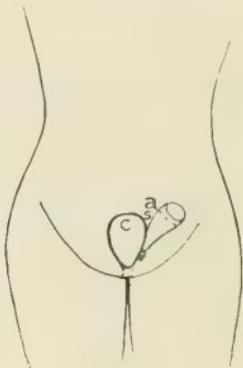


DIAGRAM B.

needle had entered, while I placed an index finger in a similar situation inside the shortened sac tube, and, thus guided, passed a narrow knife blade down alongside the needle into the little pus cavity, and then enlarged the opening with forceps sufficiently to insert two pieces of drainage tube of one-quarter inch lumen. The closure of the wound and the orifice in the abdominal wall around the drainage tubes was now completed, and some saline solution run into one tube, flowing out through the other.

The patient is making a good recovery, some recurring tachycardia with anemia and pain around the waist-line delaying the recovery; but for this I would have had the patient brought up here to-day. Some of the sutured edge of sac sloughed away with the discharge during the healing process.

Two or three days ago, by the use of the probe, I detected a roughness which I thought might be a stitch, about five centimetres down from the orifice, near the bottom of the sinus, and yesterday this was demonstrated to some members of the post-graduate class and others, and after a little fishing with this pair of alligator forceps, I seized, and with slight traction drew out, the silk-worm gut stitch which I show you. Silk-worm gut was only employed in the external wound, and by what process the stitch was inverted to a depth of two inches or more is a puzzle which I thought worth mentioning.

(To be continued in our November issue.)

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## TUBERCULAR PERITONITIS.

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By C. H. MAYO, A.M., M.D.,

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We may truthfully say that the contagious and infectious diseases have served an important purpose in the development of civilization, by forcing a knowledge of hygienic laws, compelling the world to the isolation of the one and the watchful care of the other, and teaching the lesson that physical and mental development must go hand in hand, would man be near perfection and reproduce a high type of his kind.

History records the terrible ravages of these diseases when transplanted into virgin soil, as shown by the disappearing peoples of the Pacific Islands and the Indians of our own country. We find, also, that the wonderful fecundity of the mixed races is held in check by their low physical resistance.

Our knowledge of tuberculosis is keeping pace with the general medical and surgical progress of the age. Considering this question, we find the surprising reports from those places in which large numbers of necropsies are made, that from 78 per cent. in the United States, to as high as 89 per cent. in Germany, of all cases examined, show the presence of active, latent or healed tuberculosis.

These figures are possibly somewhat high for the total population of the countries where taken, as such examinations

would be made most frequently upon those who had seen much hardship and finally terminated life in some charity hospital. The evidence tends to show that, while the tubercle bacillus often causes great destruction of tissue, it seldom causes death unless the infection is mixed with other germs, if we leave out of consideration the effect produced in the brain.

Peritoneal tuberculosis was found 284 times in 13,922 necropsies, as collected by Grawitz and Bruun, and noted by J. B. Murphy in his recent most thorough monograph upon the subject. Barschke found that but two cases which he could consider as primary out of 226 cases, the lungs being involved in 200 of the number. While always due to the tubercle bacillus, it is practically always secondary to tuberculosis in other regions. Although it is possible for infection to be introduced to the peritoneum by the blood stream, the lymphatics or by extension of tissue, we know as a clinical fact that it does reach it most commonly through the tubes, the uterus, appendix or perforating ulcer. In fact, it would seem that the peritoneum is more resistant in this than it is in other infections, and when the primary focus, which supplies the local infection, is removed, it is capable of wonderful repair. We find about five women afflicted to one man, from the frequency of tubal tuberculosis. The ages most commonly affected are from twenty to thirty years, although there are some cases in children between the ages of two and five years.

A tuberculous family history is reported in from 30 per cent. to as high as 71 per cent., although the highest does not seem excessive when we consider how commonly the disease is found in some form.

From the pathological findings, the peritoneal type is usually classified into miliary with ascites, the adhesive or fibroplastic, the suppurative or mixed infection and the nodular. Wunderlich analyzed five hundred cases which showed 68 per cent. exudative, 27 per cent. fibro-adhesive and 4 per cent. purulent. Practically the pathological findings vary with the purity of the infection and the resistance of the tissues involved. The great majority of the infections are in the lower half of the abdomen, which is always found most diseased adjacent to the source of infection, the inflammation gradually fading as we get further away from the primary focus. This is true of most all varieties of the disease. Tubal infections usually present the purest type of the miliary variety with ascites, the uterus and appendix next. The mixed infections develop the other forms according to the virulence of the contamination.

Tuberculosis of mucous membrane is a very common condition, leading to ulceration, and in the appendix to perforation, also occasionally in the bowel. We have seen four cases in the upper abdomen which recovered after laparotomy with removal of the fluid, and in which the source of infection could not be located in the limited examination then made, although many adhesions were found about the region of the gall-bladder, pylorus and duodenum. The local miliary deposit in the peritoneum, and in the complete freedom of such condition in the pelvis, would tend to refute the old theory of gravity being a cause of the increased frequency of tuberculosis of the pelvis. One was in a man, the other three were in women. They were all in older individuals, being from forty to fifty years of age.

Tuberculosis of the peritoneum, as produced by leakage from a local infection of a mucous membrane is a common cause of ascites. Such cases usually develop exacerbations of temperature from 100 to 103 deg., with an evening rise, even in the quiescent stage. It is not uncommon to find a history of more or less pain in the lower abdomen, which seems to be increased by peristalsis of the intestine, and is relieved when the abdomen is increased in size with fluid, just as is the case with tubercular pleurisy. When the infection is in the pelvis, the fluid prevents a thorough examination bimanually. There may often be but little pain upon vaginal examination, and a variable amount of movement may be found in the uterus and adnexa. With less fluid there is a more rigid abdomen, which is often boardlike in this respect and is therefore suggestive of the condition, as it is less painful than the other types of infective peritonitis, and the disease usually has already run a more chronic course.

Many cases of tubal tuberculosis will be found in operating for chronic and subacute appendicitis. It is advisable, in women, to always gain an idea of the pelvic condition, if possible, while the abdomen is open, if the diagnosis is questionable; especially is this true if free fluid is found without a sufficient active condition of the appendix to account for its production.

In many instances, the only diagnosis possible is a tumor or a condition of the abdomen which it will be safer to explore than to leave, with our knowledge of the effects of the disease of the peritoneum. However, in most cases a fairly exact diagnosis is possible and will be made.

Unintentionally, forty-two years ago, Spencer Wells operated upon a case of tubercular peritonitis. The operation was only an incision, diagnosis of the condition and closure of the

wound, yet the case went on to recovery. Since then, many hundred similar cases have been subjected to the same treatment, with a good percentage of cures. Rouch collected 358 cases with 70 per cent. of immediate recoveries, and 14.8 per cent. of cases lasting more than two years, with very many well, although a less period had elapsed. Wunderlich collected 344 cases, with 23.6 per cent. of deaths and 23.3 per cent. of cures over three years. Czerny thinks the cures are between 40 and 50 per cent.

The majority of the operations have been by open incision, with a more or less thorough removal of the fluid and closure of the wound without drainage. Occasionally some operators have made a practice of drainage, but with increased risk of mixed infection, intestinal perforations and also ventral hernia. By many it was considered a good plan to insert a quantity of iodoform emulsion in glycerine at the time of evacuation of the ascitic fluid. Others removed the fluid by trocar and injected air into the abdomen. The reasons given as to why relief was obtained were various and many. Some said the effect of anesthesia was favorable; others that the operative trauma produced a reparative effect, and that the reduction of nourishment by removal of fluids was influential—that the removal of fluids and fresh flow of serum was destructive to the tubercle bacillus. Many thought that the air was influential, and held the abdomen open for a certain period, while other surgeons allowed the light to enter the incision as freely as possible. However, it was from some or all of these methods that recovery was frequent from one operation, or in many cases, from two or three similar repeated procedures.

It was found by operation, where the condition was general with ascites, that a serous peritonitis was converted into that of a plastic fibrinous type which walled in the local infection, usually originally a mucous membrane lesion, and maintained it as a local condition, excluding the general peritoneal cavity from its influence.

In our surgical work upon tubercular peritonitis, we have practised very many of the methods in vogue at the particular time the operations were made; but as some cases required two or three operations and a few relapsed after apparent cure, and others were not cured at all, we were gradually led to search for the original lesion and remove it, leaving the peritoneal condition to cure itself, and closing the abdomen without drainage. We have found the abdominal conditions always to point to the source of disease by the congestion, increased matting of

the miliary deposit or increase of general adhesions. There is usually a tubercular node of the tube near the horn of the uterus, and the repeated attacks of peritonitis are so many indications of leakage from the tube. A point picked up from a lecture of J. B. Murphy some years ago, was that in the tubercular tube the fimbriae are open and turned out, while in gonorrhea or mixed infection they are turned in and closed.

We find that tuberculosis of the vulva, vagina and cervix is not a common disease, and that tuberculosis of the uterus is uncommon during menstrual life, when the mucous lining is naturally thrown off every month; but on the contrary is found before puberty and after the menopause. Tuberculosis of the tube is rather common, and while there is much discussion as to how the infection reaches this location, it nevertheless does, and acts upon the mucous membrane as a local lupus. When leakage occurs we have developed an initiative peritonitis, yet not always with peritoneal evidence, except the local congestion. The fimbriae being open, the ascites prevents what might become protective adhesions. When the abdomen is open and the ascitic fluid removed by sopping with sponges, the serous peritonitis is converted into a plastic, adhesive variety effectively, in the cases benefited, by walling in the tube.

It would seem impossible that tubal tuberculosis or lupus would cure itself, except by degeneration of the tubercular deposit and final obliteration. The earlier work done, while favorable so far as it went, did not remove the original focus of leakage, and while seeming primary recoveries occurred in a proportion of cases, many returned for repeated operations, and others died within a few months or years of general or local tuberculosis. In fact, Borchgrevink thought the medical treatment as successful as the surgical, reporting twenty-two operative and eighteen medical cases, under the methods at that time in vogue. In our work we have found that the increased percentage of such cases occurring in women is from tubal involvement; we also found occasionally, in tubercular peritonitis, even when the tube appeared in fair condition, that drying the peritoneum and closing the abdomen resulted in a primary cure, yet they later appeared with pelvic masses, and a second laparotomy, with the removal of caseating tuberculous tubes, resulted in permanent recovery. Such conditions as before stated led us, in all cases where at all warranted by the condition of the patient, to attempt the removal of the primary focus of leakage or infection. Of course, some cases must be refused

operation, as their general condition will be such as to render an operation extremely hazardous as well as futile.

In males, our incision is over the appendiceal region, while in women it is so arranged as to explore the pélvis. A tubercular appendix in an early stage, before miliary deposits appear, may at times be diagnosticated at operation by the large size of the glands of the mesenteriolum.

The utmost care must be employed not to open the bowel in separating plastic adhesions of the intestine, as they are the most difficult fistulae to close, and usually gradually exhaust the patient. As a rule, it is best to keep close to the parietal or pelvic peritoneum, separating as few adhesions as possible in exposing the region affected. In one case we were only enabled to locate the uterus by following the round ligament to its attachment. In some cases the tubal mass can be pierced and its entire contents of caseating debris and lupoid material removed, leaving the outer fibrous and peritoneal layers *in situ*, then applying iodine or iodoform emulsion in glycerine to the diseased area, and closing the abdomen without drainage. We have made this complete operation upon twenty-six cases of tubal origin, with only one death.

These conclusions are based upon 144 operations for the relief of tubercular lesions involving the peritoneum, at St. Mary's Hospital, where the operative work is done by W. J. Mayo and myself. There were 59 operations for tubercular peritonitis by the older methods; 42 were cured, 15 improved and 2 died. There were 58 operations for the removal of tubercular tubes, with 56 recoveries and 2 deaths, and 27 cases of tubercular appendicitis without a death.

## The Physician's Library

E. B. Treat & Co., 241 West 23rd Street, New York, announce the following important books for early delivery: -

*Diseases of the Stomach and Intestines.* With an account of their relations to other diseases, and the most recent methods applicable to the diagnosis and treatment of them, designed to meet the need of general practitioners. By BOARDMAN REED, M.D., Philadelphia. In a series of eighty-two lectures, complete in one volume. 1,024 pages. Illustrated. Half morocco, \$6.00; cloth, \$5.00.

*Blood Pressure.* As affecting heart, brain, kidneys and general circulation. A practical consideration of theory and practice. By LOUIS F. BISHOP, A.M., M.D., Physician to Lincoln Hospital and French Hospital, New York. 12mo, cloth, \$1.00.

*Disorders of Metabolism and Nutrition.* By PROF. DR. CARL VON NOORDEN, Physician-in-Chief of City Hospital, Frankfurt-on-Main, and Assistants. Authorized American Edition, edited by BOARDMAN REED, M.D. The fifth of the series of monographs, "Saline Therapy," 75 cents, is now ready. The preceding issues are: "Obesity," 50 cents; "Nephritis," \$1.00; "Colitis" (Colica Mucosa), 50 cents; "Acid Auto-intoxications," 50 cents; and will be followed shortly by "Gout," "Diabetes," "Limitations of Liquid Food," etc.

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*A Text-Book of Pathology.* By JOSEPH McFARLAND, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia; Pathologist to the Medico-Chirurgical Hospital, Philadelphia. Handsome octavo volume of 818 pages, with 350 illustrations, a number in colors. Philadelphia, New York, London: W. B. Saunders & Co. 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto, Ont. Cloth, \$5.00 net; sheep or half morocco, \$6.00 net.

It was with anticipations of much pleasure and interest that the reviewer began reading Dr. McFarland's work on pathology, and he can truthfully say that his greatest expectations were more than fulfilled. The book is excellent—excellent as regards

both text and illustrations. Of the latter there are a number of beautiful ones in colors, printed directly in the text. Dr. McFarland's thirteen years' experience as a teacher of this subject, besides his extensive personal research in the laboratory, has fitted him most admirably to write a text-book on pathology, and this superb forelying work is all that any one—student or practitioner—could desire. Unlike most works on pathology, the subject is treated, not from the professor's point of view, but from that of the student, the many difficult theories of the science being explained in clear, concise language. Quite a few works on pathology have come to the reviewer's desk within the last few years, but none has reached the standard of excellence held by Dr. McFarland's work.

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*The Practical Application of the Roentgen Rays in Therapeutics and Diagnosis.* By WILLIAM ALLEN PUSEY, A.M., M.D., Professor of Dermatology in the University of Illinois; and EUGENE W. CALDWELL, B.S., Director of the Edward N. Gibbs Memorial X-Ray Laboratory of the University and Bellevue Hospital Medical College, New York. Second edition, thoroughly revised and enlarged. Handsome octavo volume of 690 pages, with 195 illustrations, including four colored plates. Philadelphia, New York, London: W. B. Saunders & Co. 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto, Ont. Cloth, \$5.00 net; sheep or half morocco, \$6.00 net.

This excellent work has attained the distinction of two large editions in one year—a proof not only that such a work was needed, but also of the book's practical value. The vast amount of literature accumulated during the past year has been very carefully digested, and the latest knowledge and advancements incorporated. A practical feature of the work lies in the fact that nearly all the illustrations represent actual clinical subjects, showing the benefits of the X-rays at various stages of their application. The chapters by Caldwell give full details regarding the use and management of the apparatus, the text being fully illustrated with many photographs and drawings, including four full-page colored plates. The second edition has been brought strictly down to date, especially the case histories cited; and by the addition of much new matter and a number of new illustrations, the usefulness of the work has been greatly extended. It is the latest and best book on this subject.

*Lea's Series of Medical Epitomes.*—*Magee and Johnson's Epitome of Surgery.* A Manual for Students and Practitioners. By M. D'ARCY MAGEE, A.M., M.D., Demonstrator of Surgery and Lecturer on Minor Surgery; and WALLACE JOHNSON, Ph.D., M.D., Demonstrator of Pathology and Bacteriology in Georgetown University Medical School, Washington, D.C. In one 12mo volume of 205 pages, with 129 engravings, Cloth, \$1.00 net. Philadelphia and New York: Lea Brothers & Co., Publishers. 1904.

The authors and editor have made an earnest endeavor to furnish an authoritative, clear, compact presentation of the essentials of modern surgery. While this little book is by no means intended to take the place of a text-book, it will be found convenient for study many times when a large book is inaccessible; while for students' use in quizzing themselves or each other, in preparation for college or state board examinations, it will be of the utmost service. As with the other volumes of this excellent and very popular series, the questions are not interspersed with the text, but follow each chapter, thus permitting consecutive reading without interruption.

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*The Doctor's Leisure Hour.—The Doctor's Recreation Series.*

Facts and Fancies of Interest to the Doctor and His Patient. CHARLES WELLS MOULTON, General Editor. Arranged by PORTER DAVIES, M.D. The Saalfield Publishing Co., Akron, Ohio, Chicago and New York. Canadian agents: Chandler & Massey, Limited, Yonge Street, Toronto.

We are privileged to examine Volume I. of the series, of which we understand the number will be eight, and we are glad to be able to say that we have examined this with a great deal of pleasure. The contents of the volume are various. There are a compilation of short, readable stories, humorous and otherwise, on such subjects as the student, the professor, the young doctor, the diagnosis, the disease, the patient, the prescription, the remedy, the desperate case, the operation, the inquest, general practice, some famous doctors, the country doctor, the doctor's wife, the doctor's hours, Madame le Docteur, the microbe, Christian Science, the oculist, the dentist, the chemist, our friend the apothecary, the family, at the beginning, until the doctor comes, the young hopeful, the father, the wife, the fee (very important), in the doctor's waiting-room, and among ourselves, chapters which will be found interesting and profitable reading. We venture

to predict that this delightful series will find its way into the library of the great majority of practitioners, and that it will prove a solace after many a hard day's work. It will prove a refreshing mart to which to turn when wearied with well-doing. We congratulate the editor in conceiving this series, Dr. Davis in his splendid arrangement of it, and the publishers, that they are the fortunate medium of bringing same before our profession. The first volume is bound in a neat, handsome style, and all will be the equal of the first in this respect.

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*Lea's Series of Medical Epitomes.—Nagel's Epitome of Nervous and Mental Diseases.* A Manual for Students and Physicians. By JOSEPH DARWIN NAGEL, M.D., Consulting Physician to the French Hospital, New York. In one 12mo volume of 276 pages, with 46 illustrations. Cloth, \$1.00, net. Philadelphia and New York: Lea Brothers & Co., Publishers. 1904.

In this age of rapid progress and evolution of new theories and sciences the student of medicine, who in four years is supposed to master the intricate and varied details of his chosen profession, and the busy practitioner, who must still spend a good part of his time in research and study to keep abreast with the rapid strides of advance, both feel the daily need of a text-book which will give them the essence of the subject which they are pursuing. It is with this idea that the author has undertaken to gather the various facts and data contained in the numerous text-books and pamphlets on the diseases of the mind and nervous system, and to weave them into a compact fabric, easily studied by those who are in search of precise information.

There is not a single author or lecturer of high standing, whose teachings have not been incorporated in a condensed form into the pages of this volume.

Illustrations are used throughout the volume wherever the understanding can be better helped by the combination of text and pictures, and the price of the volume (\$1.00), based upon the certainty of a very wide usage, is low enough for every student's purse.

# Dominion Medical Monthly

And Ontario Medical Journal

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No. 4.

## THE PLAGUE OF PATENT POTIONS.

"How do thy potions with insidious joy  
Diffuse their pleasures only to destroy."

A matter which would seem to be of very great importance is beginning to engage the attention of the public at large, and, for the moment, more particularly, the medical profession. We have recently received several communications from some of our brethren on the subject, and at the last meeting of the Canadian Medical Association, held in Vancouver, August 23rd to 26th, 1904, the following resolution was submitted:

"It is a well-known and established fact that many of the most popular and saleable patent and proprietary medicines contain large quantities of alcohol and noxious drugs, which are very injurious to the health of those making use of them, not only by their direct influence on health, but by creating a depraved appetite for their continued use, which lead to the loss and disability of many valuable lives, and that the sale of these medicines is largely due to the manner in which they are adver-

tised, their vendors making exaggerated and misleading statements through the general press, literature, posters and pamphlets, as to their healing virtues and life-saving qualities, thereby inducing sufferers from disease to purchase them to their very great injury, morally, mentally and physically. The great and growing increase in the consumption of these drugs is daily impressed on our profession by our observations of the injurious effects which are produced by them on a large and daily growing number of our population, and we feel that some urgent and effectual means ought to be adopted by those who are responsible for the health and welfare of the people that will control and restrict the sale of these most injurious and pernicious preparations.

"And this Association, composed of the leading medical men from one end of the Dominion to the other, feels that the time has arrived when this great and growing evil to the public health must be suppressed; and this Association would strongly urge the Federal Government, through the department having the control and jurisdiction over matters of this nature, to take immediate steps to thoroughly investigate the nature and contents of these preparations, and to suppress the pernicious and misleading form of literature and advertising by which this sale is so largely brought about, and adopt such general and effectual measures in connection with this matter as will insure the safety of the public health, and that a copy of this resolution be forwarded to the department of the Government having control of such matters."

It is perhaps difficult to attempt a thorough inquiry into the causes which are producing the great increase in the consumption of patent nostrums, but at least two reasons may be mentioned: (*a*) The greed of gain which impels individuals or companies to enter into the manufacture of such supposed remedies as a money-making scheme, and (*b*) the greed of gain in the individual, as manifested in the desire to save money by becoming his own diagnostician, and thereby saving the fee of the medical man.

There is still another cause which might be mentioned, a

cause for which the medical fraternity is largely responsible, viz., the indiscriminate recommendation of various remedies, "specially prepared for physicians' use." Picking up a journal and casually glancing through the advertising columns, the eye will rest on an advertisement for a remedy which may be called "Vaporine" (cures while you aren't looking). The writer remembers a few years ago being visited by an agent representing this preparation, who assured him their dealings were *only* with physicians. To-day it is advertised in the press at large, "Specially recommended by the medical profession."

Another class of the community which seems to delight in recommendations is the ministerial profession. Themselves, no doubt, very excellent authorities on matters appertaining to their own calling, are, notwithstanding their ignorance in matters medical, often quite willing to give unqualified praise regarding the healing properties of certain remedies, of which they know as little as they do of the pathology of the disease for which the remedy is praised.

But of the evil itself: How very disgusting are some of the ads. we read in the papers—open exploitation of abortifacients; manhood lost and regained (if you don't believe it, look at the pictures, before and after); syphilis and other appetizing matters served up publicly; piles cured (while you wait) without the aid of the surgeon's knife; and, too, that good old standby, "Fits Cured" (no matter what the cause). Verily a very interesting array of information for your child to read in the morning paper! Occasionally the makers of these wonderful remedies kindly (?) take the medical man into their confidence, and assure him, "Dr. So-and-so is using our potion, with truly marvellous results." A maker of boots once had the impudence to send the writer a sample of a wonderful salve made by himself, and guaranteed to cure burns, bruises, boils and the "buckwheat scratches," and also handed him a list of the names of a few rather prominent medical men who were using his wonderful remedy.

So much for the etiology and symptoms of this widespread evil: What about treatment?

It would seem that the treatment ought not to be difficult.

In many of these cases the advertisements simply claim impossibilities, as anyone can see for himself in the daily paper. Messrs. D— Lie & Co. guarantee to cure this, that and the other organic disease by means of their infallible remedy. It matters not if it be a case of sclerosis of the cord or degeneration of the kidney; all ills yield to their wonderful treatment, *and a vast mass of the public believe them.* In other words, they are obtaining money under false pretences, and as such offenders, ought to be easily made to suffer. Why not make it an offence for any newspaper or journal in this country to publish the advertisement of any foreign nostrum vendor, and a still more serious offence for any Canadian to make or advertise for sale any remedy which could be adjudged by a competent board of inspectors an imposition on the general public. Incidentally, it would go far to cure the evil if every manufacturer of such stuff were by law compelled to give the contents, with exact proportions, printed on the outside of each bottle. In this way it could be readily ascertained if one were taking an undue proportion of bad whiskey with one's bitters.

Lastly, as to prognosis. If one is to reflect on the innate selfishness of the genus homo, the outlook is not of the best. The fact is, the public at large "do not want to be 'done good.'" Certainly, if left to themselves, I dare say they would prefer to prescribe for themselves and go on spending their money on the sure cures (and the sure failures in so many cases).

From an economic point of view it is just a question if the wise minority should not rise up and surround the great unthinking majority with adequate safeguards against the growing plague of universal and indiscriminate dosing.

## NEWS ITEMS

MCGILL UNIVERSITY has celebrated its seventy fifth birthday.

DR. D. N. McLENNAN has removed from Carlton Street to 126 Bloor Street, West.

LORD STRATHCONA has contributed \$50,000 towards the purposes of the Medical Faculty of McGill University.

ANOTHER Chinese leper has been captured on the streets of Vancouver, and transferred to the leper colony on D'Arcy Island.

WE are glad to be able to announce that Dr. Herbert A. Bruce, of Toronto, is recovering rapidly from an operation for appendicitis.

THE attention of our subscribers is drawn to the change in office of publication of the DOMINION MEDICAL MONTHLY to 203 Beverley Street.

ST. PAUL'S HOSPITAL, Vancouver, has recently opened a fine new wing. This hospital can now provide accommodation for four hundred patients.

THE Toronto General Hospital had 514 patients in residence in the month of September. There were 1,112 cases in the outdoor departments. At the Emergency 231 accident cases received first aid.

DR. J. ALGERNON TEMPLE, Professor of Gynecology in the University of Toronto Medical Faculty, delivered the opening lecture for the session of 1904-5, on the evening of October 4th. We will have the pleasure of publishing the address in full in our next issue.

DR. S. J. TUNSTALL, Vancouver, accompanied by Mrs. Tunstall, has been East for five weeks, visiting Montreal, Boston, New York and Toronto. Dr. Tunstall, as President of the Canadian Medical Association, has been discussing the question of Dominion registration with prominent Quebec physicians.

DR. GEORGE F. BUTLER has severed his connection with the Alma Springs Sanitarium, at Alma, Michigan, where for nearly five years he has been medical superintendent, and has returned to Chicago, where he will henceforth limit his practice strictly to internal medicine. He will fill the chairs of Professor of Therapeutics in the College of Physicians and Surgeons, and Professor of Medicine in the Dearborn Medical College. He has also been appointed as one of the attending physicians in the Samaritan Hospital. Dr. Butler will continue to edit and publish his magazine, *How to Live*, and it is understood that he has under way another medical work for a Philadelphia medical book publisher.

PRESIDENT AMADOR, of the Republic of Panama, has appointed the following officers of the Fourth Pan-American Medical Congress, to be held in Panama the first week in January, 1905: Dr. Julio Ycaza, President; Dr. Manuel Coroalles, Vice-President; Dr. Jose E. Calvo, Secretary; Dr. Pedro de Obarrio, Treasurer, and Dr. J. F. W. Ross, Dr. J. Tomaselli, Dr. M. Gasteazoro, Committee-men. There will be but four sections, surgery, medicine, hygiene and the specialties, to which the following officers were appointed: Surgical Section: Major Louis LaGarde, President; Dr. E. B. Harrick, Secretary. Medical Section: Dr. Moritz Stern, President; Dr. Daniel R. Oduber, Secretary. Section on Hygiene: Colonel W. C. Gorgas, President; Dr. Henry E. Carter, Secretary. Section on Specialties: Dr. W. Spratling, President; Dr. Charles A. Cooke, Secretary.

## Correspondence

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*To the Editor of DOMINION MEDICAL MONTHLY:*

Dear Sir,—In the July number of your paper I notice a synopsis of the discussion which took place after the reading of the life insurance papers at the recent meeting of the Ontario Medical Association. You credit me as stating that,

"If the doctors are not sufficiently paid, it is largely their own fault. There are physicians who are willing to accept the present fee, and so long as the company could get the services of such men, they could not be expected to pay more."

Permit me to say that I was not the author of those remarks. I do not know the name of the gentleman who was responsible

for them, but from what he said I came to the conclusion that he referred to the fees paid by fraternal assessment societies, rather than those paid by regular life insurance companies.

I will be much obliged if you can find space for this letter in your next issue, as I do not care to be put on record as being the author of the remarks above referred to.

Yours truly,

PERCY C. H. APPS,

*Actuary.*

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## Special Selection

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### RESPIRATORY TRACT.—AFFECTIONS, SYMPTOMS AND TREATMENT.

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BY DR. ARTHUR B. SMITH, SPRINGFIELD, O.

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The average physician is frequently vexed in finding a condition which resists his best efforts to bring about a cure. This holds good in almost every disease at some time or other, but particularly in affections of the respiratory tract, where there may be a great variety of symptoms in several cases of the same disease.

Almost every physician has some favorite prescription for coughs, bronchitis, laryngitis, etc., which he uses until suddenly it seems to lose its efficacy—why, no one knows. Then another remedy takes its place until it, too, fails to give the desired result. It is rarely that one finds a cough remedy which will be consistently good in the majority of cases. Theoretically there appears to be a well-founded objection to the use of cough syrups in general, but nevertheless there are times when nothing else gives satisfaction; therefore, the physician pins his faith to that remedy from which he and his patients derive the most good. It is not always easy to find such a remedy, but when it

is once found, it is equally difficult to dispense with, and often the physician is almost compelled to resort to a routine treatment. In such cases, of course, he wants the best.

There are constantly being placed on the market new formulas for affections of the air passages. Some of these formulas are of undoubted benefit in some cases, but usually it will be found that the results are far from satisfactory. Many of them cannot be taken when there is any gastric complication, as is sometimes the case, because of consequent nausea and vomiting. Others seem almost invariably to act as cardiac depressants and are highly objectionable for that reason. With the advent of heroin, however, these disagreeable features have, to a great extent, been avoided. Heroin, in the vast majority of cases, can be tolerated by even the most sensitive stomach, and, if any disturbance should occur, it can easily be obviated by decreasing the dosage and then gradually resuming the previous amount. Heroin can be prescribed, in cases which are complicated by an enfeebled heart, without danger of depressing effects. As compared with codeine, its sedative action on the respiration is much more powerful. The fatal dose of heroin is said to be one hundred times the efficacious dose, while with codeine the efficacious dose is one-tenth of the fatal dose. In other words, heroin is ten times safer than codeine, and can be given in much larger doses, if necessary, without danger. It appears to exert a specific action on the centre of respiration without causing disturbances of any other organs or centres, and there is no danger of acquiring any habit by its use.

In phthisical patients the well-known lack of appetite and intolerance of various foods render it imperative to give remedies which will not in any way interfere with the digestive functions, while at the same time controlling or alleviating the cough and other distressing conditions.

Some time ago my attention was called to a preparation composed of a solution of heroin in glycerine, combined with expectorants, called Glyco-Heroin (Smith). Each teaspoonful of this preparation contains one-sixteenth grain of heroin by accurate dosage. It is of agreeable flavor, therefore easy to

administer to children, for whom the dose can be easily reduced with any liquid, or by actual measurement. It possesses many advantages not shown by any other preparation I have used, and has none of their disagreeable features.

In citing some of the cases treated with this remedy, I shall not go into a minute description of any case, but briefly state the conditions which existed and the results obtained, which were uniformly good.

Case 1.—S. B., aged sixteen. Caught a severe cold while travelling. This developed into an unusually severe attack of bronchitis with mucous rales, pain, cough and some slight fever. Prescribed Glyco-Heroin (Smith), one teaspoonful every two hours, decreased to every three hours. After a few doses were taken there was a decided improvement, the respirations were slower and deeper, the expectoration freer and the temperature normal. In a few days the patient was practically well and able to return to school. No medicine except Glyco-Heroin (Smith) was given, and the results from its use were excellent.

Case 2.—W. L., aged thirty-one. Acute bronchitis. Painful cough, with difficult expectoration, particularly when in a reclining posture. Glyco-Heroin (Smith) in teaspoonful doses every three hours gave speedy relief and a cure was effected in a few days.

Case 3.—S. W., aged sixty. Chronic bronchitis. Had coughed for years, with expectoration of a thick, yellow purulent and very offensive matter. Had lost flesh gradually until about twenty pounds below usual weight. No appetite, very constipated, pains all over chest, night sweats and insomnia. Patient on the verge of nervous prostration and greatly weakened. She was given bromides, a tonic, and Glyco-Heroin (Smith), the latter in the usual dose at intervals of two hours. The first few doses were not well borne, as they seemed to cause some nausea, but by giving a smaller dose and then gradually increasing it, tolerance was soon obtained, and the results were remarkable. The cough and expectoration greatly decreased, the appetite improved and the patient became much better in every way. The treatment was continued as before, except that

the Glyco-Heroin (Smith) was given every three hours. In three weeks the patient was eating almost everything she pleased, and sleeping well. The night sweats had stopped, together with the cough, and, as the patient expressed it, she "felt like another woman." At present she is in perfect health and needs no medicine except an occasional laxative.

Case 4.—B. E., aged twenty-six. Severe bronchitis accompanying an attack of influenza. Various remedies were tried in this case, with negative results, until Glyco-Heroin (Smith) was given in teaspoonful doses every three hours. In a short time decided relief was obtained and the cough stopped permanently.

Case 5.—R. L., aged six. Capillary bronchitis, with pains over chest, cough and difficult expectoration. Glyco-Heroin (Smith) administered fifteen drops every three hours. After taking a few doses the condition was much improved, and a speedy return to perfect health followed.

Case 6.—W. H., aged five. Whooping-cough. Spasmodic paroxysms of coughing, sometimes being so severe as to cause vomiting. Tenacious mucus was present, requiring great expulsive effort to loosen it. There was little fever, but the patient was much prostrated and weakened by the cough. Glyco-Heroin (Smith) was given in ten-drop doses every two hours, with good results. This was combined with hygienic treatment, the patient being given as much fresh air as possible. In a few days the condition was much ameliorated, the cough under fair control, expectoration was freer and easier to raise, and convalescence uneventful. The case was discharged cured, and there were no unpleasant sequelæ, the patient at present being in perfect health.

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## Original Articles

### ADDRESS ON OPENING OF MEDICAL SESSION, TORONTO UNIVERSITY, OCTOBER 3RD, 1904.

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*Mr. President, Ladies and Gentlemen*—I must acknowledge with deep feeling the honor which my confreres have done in selecting me to deliver the opening address to you this session, an honor of which I feel more deeply sensible, when I realize how many among you here present are more gifted than I, and more worthy of this distinction; but none more earnestly desirous than I am of doing my share of the work of publicly presenting the strong position and attainments of this great school, and the strong medical arm which we must all feel our University now possesses in the amalgamated faculty.

To-day we enter upon the second session of the combined schools of medicine, and if the past session be an earnest of the success which we are to meet with in the future, we will indeed have reason for congratulations. The harmony and success of what some were inclined to think an experiment, has been demonstrated beyond peradventure as a decided step in advance.

We are this year continuing the work for which the foundation was really laid last session, the work made possible by the amalgamation of the medical colleges, and the enlargement of the medical faculty, the construction of this building, and the

equipment of laboratories contained therein, presenting a combination of circumstances sufficient in efficiency and equipment to guarantee a medical education for the country which will bring it into the foremost rank of the world. But this satisfactory state of affairs has only been rendered possible by great sacrifices made by every member of the medical staff, who in this particular has maintained the reputation which is the pride of our profession—that where progress in medical science is to be made, or where the status of the medical profession is to be enhanced, or where benefit is to be conferred upon those who are to receive the consideration of physicians, such work must be proceeded with regardless of the sacrifices it entails. The amalgamation of the medical college, and the fusion of the two medical faculties does not mean merely the formation of a huge medical combine—it means far more. It means a unification of medical interests in the province, and their welding with the interests and the life of the Provincial University, and the focusing of its powers, and with all its far and wide-reaching influences to compel the recognition and support which this institution and our profession are justly entitled to demand. Furthermore it means obliterating the line of separation which might attach to this or that graduate of any particular school. It tends to obliterate those influences which separate students and practitioners in their early professional career, and which have in the past sometimes been carried on and continued in after years, when they should long since have been forgotten, and enables the student to avail himself of the best in medical science and example procurable. I hope in future years many of you will see, when this plant shall have reached its maturity as the result of its renewed life, a fragrance and a beauty which will make the advancement of medical science renowned in all places where that science is known.

In no department of knowledge has the separation of thought from the tangled mesh of scholasticism been followed by more or greater benefits to science and humanity than in medicine. Since reason displaced authority, and demonstration superseded unverified hypothesis, medicine has gradually worked its way into the front rank among so-called natural sciences. Thanks to the method of experimentation, medicine, as an art and a science, has made more advance in the last two centuries and a half than it had made in the previous eighteen.

If this work is to continue and grow it can only do so by the distribution of that knowledge regarding medicine, which

when thoroughly comprehended will appeal to government and people alike, and compel that support which even no higher motives than self preservation prompt. Over and over again it has been demonstrated and proven that the increase of medical knowledge is an asset of value to the community in which it has occurred. Let us stop for a moment to survey some of the branches of our work which more intimately touch the masses of people. I do not propose or claim to be able to present a perfect and complete portrait of the marvellous progress of our craft, but even the dullest can see some rays of light in the picture which must appeal to them very strongly. No more than half a century ago the unfortunate and over-worked, suffering from that direst of all afflictions the loss of reason, was separated, not only by his own but by the mental darkness of his day; and restraint, confinement, torture, chains and fetters, the straight-jacket, terrorization, manacles and excommunication was the treatment of the insane. As his violence increased these were intensified. Once within the door of an asylum his doom was sealed, his life among the damned. But fifty years of progress and advancement have abolished all this, and to-day the bond and the straight-jacket are things of the past, whilst sunshine, comparative happiness, home comforts, the development of restful surroundings, proper nourishment, freedom from care, and the supplying of well regulated pleasure has become the lot of this class of sufferers. This same line is developing still further, and though even to-day the horrors of the past attached to the idea of an asylum for the insane, may still prevail in remote regions, the very word is being expunged from the language of our nation, and replaced with the pathos and the meaning of home, and the conditions created necessary not only to cure, but to prevent the more distressing manifestations, and to eliminate the odium which attaches to the very name of the only institution where the mentally unsound can reasonably hope for shelter. Again, when we turn to the department of surgery, and survey even superficially the marvellous progress and attainments of this department of our art, when we stand in horror before the pictures of the suffering, torture, and agonies endured prior to the time of Sir James Y. Simpson; when we read in our literature of the hemorrhage from the amputated stump being checked by the application of melting tar and red-hot iron; when we endeavor to enumerate those regions of our body which were forbidden the surgeon because of the writhings unavoidable in the absence of anesthesia; when we see to-day

the results of the ligature and antisepsis; when we read of the success of the abdominal surgeon and the almost fairy pictures revealed in intra-cranectomy rendered possible alone by the quiet and unostentatious yet unremitting labors of the plodding student, is it any wonder that we should apply for some measure of recognition from governing bodies, or from the great mass of the public, who either do not know, or do not heed these great achievements? Rather is it not a wonder that we are not inundated by earnest offers to contribute in their own way to extend these great blessings? When we look again at what has been achieved by the great pioneers in medicine in the matter of public hygiene, in improved sanitary surroundings, in emphasizing the importance and value of preventing diseases which are preventable, how there has been almost wiped out of existence some of the devastating plagues so prevalent fifty years ago; how there has sprung up organizations and laws for the benefit of communities, rich and poor alike, and in the saving of human life the amassing of those assets which governments and people profess to be so jealous of. We do not marvel that in the great and progressive industries of the world to-day wealth is being directed towards the endowment and equipment of such machinery. We do not have to look far for such examples, across the line, where we can find many instances, we regret to say almost daily evidences, where the flower and the brilliancy of our Canada has been attracted by the congenial harbors and wider fields afforded for those whose lives are to be spent in scientific advancement so closely akin to our own. If this country is to keep its place, if it is to sustain its reputation and its scientific prowess, two things must assuredly happen. The Government must recognize more fully and perfectly than it has in the past the real commercial value of scientific education and scientific work; and the creator of wealth must also realize that he owes some measure of his success, and some of the money made, to the great scientific institutions whose walls sheltered the quiet and unknown student in his daily and nightly task laying the foundation for a work, the tangible benefits of which are too often absorbed by what the public recognize as the successful manufacturer. It remains with the Government to do its part in this great amalgamated scheme and realize the necessity at once of endowing such Chairs as Bacteriology, Hygiene, and Pathology, and in furnishing sufficient funds for securing teachers who will be able to give their undivided attention to these all-important branches. It remains for the wealthy mer-

chant to follow the examples of those in the Republic to the south of us, and in his private beneficence give some character and feature to a country growing prematurely old by the consumption of its crude material. The recent generous and munificent gift of Mr. Cawthra-Mulock, I hope will stimulate some of your wealthy citizens to follow his example and give of their abundance. I trust Mr. Mulock may be spared for many years to come, to see the fruits of his gift abundantly realized, for to no better cause could he devote his wealth than the furtherance of clinical research and the relief of the suffering poor.

To those of you who have already been associated with us in the past I extend a most hearty and cordial welcome, and also to those who for the first time appear here to-night. I would express the hope that the same devotion to study, which has in the past characterized the medical students of this University, will be fully maintained by the class of this session, and the mutual respect and good-will which has existed in the past between professors and students will continue, developing a kindly feeling and interest in each other. I can assure you, gentlemen, that you have no warmer friends or well-wishers for your future welfare than your professors. Long after you leave these halls your progress in life is watched and your successful climbing up the professional ladder affords us both gratification and pleasure.

The science of medicine requires a wide and varied experience in other departments of knowledge; it is not enough for you to confine your studies to medical works alone, you ought to be well read in other subjects or you are apt to become narrow in your views. The more time you can devote to other branches of science the better fitted will you become to understand the many complex subjects of medicine. The great aim of medicine is the prevention of disease, the preservation of health, and the cure of disease.

Medicine is one of the most difficult studies you can enter upon. To grasp fully all that has been written to-day on medicine is a task not lightly to be entered upon. It will require all your energies and determination to master even in a most superficial manner its very outlines; yet for all that it is one of the most interesting and attractive studies you could possibly select, and as you proceed step by step its attractiveness and beauty will gradually unfold itself to your mind, and what to-day appears to you as being quite beyond your grasp, you will in time be able to know and appreciate. The elementary

branches to the beginner will prove tedious and irksome, and you will often feel discouraged; but persevere, be not discouraged; a mastery of these subjects will teach you the dependence and relationship the one to the other, and in due time you will be able to put into practice what you have learned in the lecture-room, and the investigation and treatment of disease will soon be appreciated, and what was at one time a hardship to you will afford you pleasure and gratification. It is most important early to acquire the art of doing what you may at the time consider uninteresting work in a serious and determined way.

The first year or two of the student's life is the most momentous time of his whole student career; if he wastes that time it is an opportunity lost forever, he can never recall the wasted hours. If, on the other hand, he avails himself of the opportunities placed within his grasp, he lays a foundation which will ever prove invaluable to him; and when he passes from the classroom to the hospital wards he will never come out of them without having learnt something he never knew before. His future may be either a success or a failure; it rests with himself which it shall be. I am no believer in what is called "luck" or "fortune," but believe every man's success depends on his own steady and persistent labor; his future success is largely under his own control; the truly successful men are those who do their work and do it with all their might. The lazy, procrastinating, waiting man is, with few exceptions, a disappointed man; he waits and waits for something to turn up, but he waits in vain; his life slowly passes away; the opportunity he hoped for never came, and in the sunset of his days he finds himself a disappointed man, his youth spent, his energies dead, his hopes extinguished; he has wasted a life which might and ought to have been better in its success, and yet even then he fails to see he has himself alone to blame. I hope that this may not be the lot of any one before me. If you want to succeed, begin now; let your watchword be "work"; strive with all your might to avail yourself of the opportunities now placed before you, and success will be yours. It is quite true, "The race is not always to the swift or the battle to the strong," that many men possessing more than average ability, yea, even brilliant intellects, have failed, and it is hard sometimes to know the reason why; I think it is because they lacked perseverance, the knowledge of the little things that go to make up the man, perhaps I may call it common-sense.

Enter on your studies with a firm determination; work methodically; lay out for yourself a certain amount of work to be done daily, see that it is done, let nothing prevent your doing it; do not let yourself become careless or indifferent to your work; you may often feel weary, fatigued, or even despondent, but do not let your feelings conquer you, and there can be no question of failure in the end. Success is sure to be yours. Constant and regular attention in the lecture-room is essential. I am thoroughly convinced that didactic teaching is as essential to the student as any part of his whole training. I do not wish to overburden the student with lectures, but I fear there is a tendency in some quarters to ignore their usefulness. This, I think, is a great mistake. There was a time when too many lectures were required of the student. He was compelled to follow the same course of one hundred lectures on one subject twice over—an obvious absurdity. But to-day the C. P. S. has wisely cut the lectures down to one-half of their number, and perhaps there are still some subjects the lectures on which might be still further lessened; but to do away with them altogether I think most ill-advised. A student in the course of his lectures will every day learn something from the professor which he will never learn in the same manner from his text-book. A carefully thought-out lecture will prove of great advantage to any student who listens attentively and takes notes from it. Attendance in the laboratories, where so much is to be learnt, cannot but prove of inestimable value; it is here you learn what you cannot learn elsewhere, and to-day so much is done in the laboratory, that you cannot afford to lose any opportunity of careful attendance to the instruction given there.

In these days the science of medicine is making tremendous strides, encouraged and prompted by laboratory research, and many a seemingly small discovery may mean a great bound in professional advancement; but whilst the laboratory undoubtedly has its purpose, and the cloister studies of original research may result in invaluable benefit to the medical practitioner, we must not forget the wide field of medical work, where nature plays the part of a cruel and relentless vivisector, produces many an experiment which you will be asked to interpret, and the results and bearings of which you must forecast with a certain degree of absolute accuracy. In the life of a medical practitioner the laboratory must never be permitted to supersede that larger laboratory, the hospital ward, nor the study of those intricate problems of disease whose relief is the life-work of the true

physician, and whose surroundings are often dissimilar in every way from what he might be led to fancy they would be from studying only the narrower feature in laboratory research.

The importance of hospital attendance is of extreme value; here you will learn the habit of observation, and familiarize yourself with investigations into the diseased conditions of man. Clinical investigation at the bedside will give you confidence in yourself and enable you to investigate for yourself the various forms of diseases.

Reading and study is essentially necessary to acquire the knowledge of the causes and symptoms of disease, but clinical experience is still more necessary to enable you practically to apply that knowledge. The responsibility that rests on you as a practitioner is very great. To your care and skill will be entrusted many a valuable life, and if you should prove ignorant, incompetent, and not prompt and decisive in action, you may perhaps be the means of losing that life, of depriving a family of the love and care of a mother or father whose place can never be filled. If, on the other hand, you are competent, you will have the undying satisfaction, it may be, of snatching a life from the very jaws of death. What can be of more satisfaction to any man than such a reward? No pecuniary remuneration is equal to your own consciousness of the successful discharge of your duties. The grateful thanks of the poor man, who has only thanks to offer for your services, will be esteemed by you as of more value than the money of him who only values your services at so many dollars. The day you are enrolled as a member of the medical profession, that day your responsibilities begin. Until then you have scarcely known what responsibility means; and as you proceed in your professional career, responsibility continues to increase with your increasing work. You will some day realize the tremendous weight of this responsibility. When, for instance, you stand at the bedside of some stricken and dearly beloved member of a family who have called you in, and who have placed their whole trust and confidence in your skill. The stricken one may perhaps be the head of the family, the bread-winner, upon whose daily work depends the existence of a large family of helpless little ones; or it may be the dearly beloved mother, who has tended and toiled so hard for her children, and whose loss is irreparable to that young family, who wait and yearn for her recovery. Or, again, it may be a child, perhaps the only and dearly beloved child, for whom your ministrations are sought by the sorrowing parents, the going out of whose

life would crush their every hope, and you stand there entrusted with their full confidence. They will watch your every movement—they will listen eagerly for some words of hope from you; their gaze will seem to penetrate through and through you and to read your inmost thoughts. Upon your decisive action, your skill, the balance is turned, the life is snatched from the grave, the joy and light of that household is once more restored, and you have the unbounded satisfaction of knowing that you contributed in no small measure to that happiness. Do you not think that this is a responsible moment in a man's life? Is it not sad to think, on the other hand, that through ignorance, neglect and carelessness, you may have helped to sever the tender cord that bound that precious life to the bereaved family? We cannot save every life, nor can we expect to; but we are expected most assuredly by our patients at least to commit no gross blunders. To avoid such mistakes can only be done by constant study. The more busy you become the more study is called for; the more constant must be your observation of disease in all its forms. It is then you will learn the value of your attention to your clinical work in your student days. Your teachers have had to learn all this before you. Take every advantage of their well-earned and rich knowledge. They are only too willing to impart it to you; but you should realize that they have acquired that knowledge by hard work and untiring devotion to their studies.

The practice of medicine demands of us the greatest devotion and self-denial—and not unfrequently true heroism. How seldom does the medical man receive proper recognition for acts of the truest bravery performed in the discharge of his duties? It is not in the din of battle, or the excitement amid the roar of cannon and shouts of the victors, that he is called upon to do some act of bravery, but in the harrowing hush of some dread disease or epidemic, that the physician daily takes his life in his hands, and goes in amongst the sick and dying even where the nearest relatives shrink from going. There he is to be found, ministering to the suffering, soothing their last moments with his presence, never thinking of himself or the danger he is exposing himself to, but only of the faithful discharge of his sacred duty. How many noble men in the past have, under such circumstances, sacrificed their lives in their endeavors to stem some dread epidemic, to find out some mystery about the disease that is rushing over the land. History tells us of many such noble sacrifices, but they are soon forgotten; no monument is raised

to their names to commemorate their noble, heroic deeds—such public praise is kept for the soldier alone—and yet I claim their bravery was equal to the bravest act ever done on the field of battle. Follow the surgeon on the battlefield. Where is he to be found but in the very foremost post of danger, in the very firing line, amidst the shot and shell falling thickly around him, calmly ministering to the needs of those brave fellows who lay down their lives for their country? He heeds not his own danger; where duty calls him there does he go unflinchingly to do that duty. But it is seldom we hear of him as receiving rewards equal to his brother officers. Of course, I do not say that all are overlooked, but of the many who deserve recognition and honors, few, indeed, receive their rightful share. In the great war at present engaging the fascinated attention of the whole world, the surgeons must of necessity be doing an immense deal of courageous work. Not only on the battlefield do they toil, but long on into the weary hours of night they must continue their labors when other soldiers are taking their rest. The fearful amount of disease that must at present be raging amongst those two mighty armies engaged in mortal strife, must tax the strength of the surgeons beyond our conception. If occasion should demand of any one of you present to risk your life in the discharge of your duties, I know you will never shrink from that duty.

Truthfulness and loyalty must at all times characterize your life and actions. Be loyal to your King, your country, your profession and yourselves. Never be tempted to do a mean thing that would bring discredit on any one of them; you have not been so taught in the past, you can find no excuse for so doing in the future. Some day in the near future you will come to this great university to seek at her hands the highest gift she has to give, viz., her diploma. I tell you, gentlemen, if she could foresee that you would some day tarnish her honor by some dishonorable act, no inducement, however great, would tempt her to entrust you with that diploma. She looks to you to help build up her reputation and not drag her honor in the mire. If your only object in seeking admission to the ranks of medicine is to gain wealth, you will be doomed to disappointment. Few, indeed, are those who succeed in that direction. You can at all times, by strict attention to your duties, make a moderate competency, a comfortable living, but not more than this.

It is only the charlatan and quack who amass great fortunes out of the too credulous public. The public are only too ready

to read their pretentious advertisements and ludicrous promises to cure all ills human flesh is heir to. Few, apparently, ever stop to enquire into the truthfulness of their glowing promises. The public press of this city teems with quack advertisements that are simply disgusting, a disgrace to our public prints, and I cannot understand why such advertisements are permitted in our midst—why any respectable newspaper will permit them on their pages.

If the profession has to maintain its high position, truthfulness and honor must reign supreme in all the dealings of its members. Tact may be important, but tact, when incompatible with truthfulness, is deceit pure and simple, and whilst expediency may be employed, remember it must never intersect the straight lines of right and wrong. The young doctor embarking in his profession meets many difficulties of a financial order, and great are the temptations he may be called upon to withstand—temptations which might lead him from the strict path of professional rectitude. I would remind you that lapses from moral or professional rectitude are never profitable. In the majority of instances they are wholly and completely ruinous; and whilst one might fancy they would afford temporary relief in cases of stringency, they all lead to one central pit of everlasting and complete professional failure. Two wrongs never make a right. If your colleague and competitor resorts to unprofessional action, it does not justify or excuse you in similar conduct. Let your profession be your highest ideal, let its influences be ennobling, and though failure encounter you, you will at least have the satisfaction of knowing that you have done your best to maintain its true ideal.

The establishment of a post-graduate course here during the past summer is a step in the right direction, a want long felt. The usefulness of a post-graduate course has been proved beyond measure by the success which has attended these post-graduate schools in Berlin, Vienna and New York, and I venture to say it only wants time to prove the same of our own. We have the material and the men to make post-graduate work a success, and practitioners throughout our province will not be slow in availing themselves of the advantages to be gained from attending for a few weeks from time to time a practical course on some of the various clinics to be given. It will be nothing but practical work, hospital and laboratory work. After a man has been in practice for some years, isolated, in many instances, from even the advantages of a neighboring practitioner, prac-

tically entirely by himself, the advantages to be derived from returning once again to the hospital and laboratory can only but be of immense advantage to him.

The progress our profession is making in educational matters ought to be a source of great gratification to us all. The preliminary education required of our students prior to entering on the study of medicine, compares favorably with the Old World, indeed, we even ask more of them than in many other places. The elevation of the standard of education tends to elevate our profession and to draw to its ranks a better class of students, and providing the standard is not raised too suddenly and beyond our requirements, no harm can come of it. Wherever possible, a liberal education should always precede professional education and training. That is, a student should be a Bachelor of Arts before he enters the medical department of the university. A liberal education fosters mental alertness and readiness of mind; it broadens one's sympathies and one's outlook upon life and the world; it stimulates the imagination and enables a man to adjust himself more easily and quickly to new conditions and unexpected complications; and it increases one's knowledge of human nature—a most essential knowledge for the medical man to possess. The student who is liberally educated, who has imagination and originality, will never be in danger of regarding his degree in medicine as merely a bread-and-butter degree. To do his work honestly and well is his first consideration. His income, though a very important consideration, will ever be a secondary consideration to the man of wisdom and honor. He who puts income first will never achieve success in the best sense of that much abused word. I cannot too strongly impress this fact upon my young friends. Nor can I impress upon them too strongly the necessity of being reading men, not only now, but all through their lives. The gift for reading is a priceless gift. Few have it by nature, but fortunately it can be acquired. The world's great men have invariably been great readers. To be well read, not only in one's profession or business, but in general literature, as well, to know the great writers of old time and the wise ones of to-day, gives a distinction and a character to a man which cannot be otherwise attained. It is one of the greatest antidotes, too, of premature old fogeyism of which I know. A doctor's life is apt to be a distracting one unless he has a firm hold on his mental machinery, if I may use such a phrase. He is called hither and thither at all hours of the day and night, and unless he determines to read a certain amount each day, and

resolutely adheres to his decision come what may, he is only too apt to fritter away his precious spare moments, and so lose his grasp on things. The use a man makes of his leisure time largely determines what manner of man he is, and what he will become. There is scarcely any pleasure comparable to the sense that one is "growing" mentally as the days slip by. Would that the spirit of self-perfection were more prevalent among us all!

Those who are gathered together here this evening are not all members of the medical profession or preparing to become members of it, not all alike interested in its welfare and repute. Much that I have said will, I fear, be of little practical concern to the laity at large, yet there is no other profession in whose well-being and reputation the public is really so deeply and practically concerned as in the medical profession. To every man, woman and child in the community the standard attained by this profession is of immense moment. Disease is no respecter of persons. No one knows how soon he may find it necessary to summon a physician to his bedside. No individual can afford, then, to be indifferent to those things which make for a skilful and learned and highly efficient medical profession. The law of self-preservation, if no other, would point out the folly of indifference. Yet for all that, and in spite of the greater prevalence in these present days of the altruistic spirit, we cannot say that the present state of public opinion in Canada with respect to the value of professional instruction of high university rank is what it should be. It may be objected by some of my hearers that it is very difficult to know what the state of public opinion is on this matter. But it may be inferred from the difficulty the profession has in arousing the active interest of our public men in medical education. When public men are difficult to interest in any question, it is generally because they imagine their constituencies are not interested, and the collective constituencies make up what is called public opinion. Without an active public opinion in favor of the highest possible standard in medical education, it is almost impossible to maintain such a standard. When the mass of the people appear to be hungering for quacks and quacking and patent medicines, a strong public opinion in favor of education of any kind is scarcely to be expected. On the earnestness with which the Canadian public regard education in general, and on their consequent willingness to spend money on it depends in large degree the standard which will be won and maintained in the Dominion. We should

allow no country to surpass us in advanced subjects of medical instruction. I have no hesitation in saying that the standard of medical education in a country is one of the most sure, if not the surest, of tests for judging the intellectual status of its people, the stage it has reached in civilization. Disregard for human life is invariably a sign of a low civilization. Moreover, money spent on education is a magnificent investment for any country. There is none better, let our politicians flatter us as they may. It is an investment eloquent of the wisdom of the ages and of to-day. You cannot estimate a nation's greatness merely by the number of bushels of wheat it exports, or by its miles of railways and canals, or by its lines of steamships, or by its coal, its iron, its gold, or by its forestry. Yet, when our orators would tell us what a great people we are, what very fine fellows we are, it is on these things they dilate. No! a nation's greatness is weighed in balances more delicate than those that weigh material things. Its standard of greatness, of success, cannot be measured in dollars—so many dollars, so much success. That country promises to be the greatest which most clearly recognizes the indisputable fact that of all subjects deserving the serious consideration of the people, education is the most important, moral and spiritual, of course, as well as material. Buckle, in his well-known "History of Civilization," tells us that the acquisition of fresh knowledge is the necessary precursor of every step in social progress, and must itself be preceded by a love of inquiry and research. It is not enough for us to be passive recipients of the accumulated inherited thought of the ages gone before. A nation to advance must make original contributions to knowledge and learning. A profession to advance must likewise make original contributions to knowledge and learning. It cannot stand still. To keep medical instruction abreast of medical progress the professor must lecture on what he is doing, on what he is by research discovering, and not on what other people have done or discussed. Do our public men, and the power behind them, recognize this fact? Are they doing what they can and should do to promote liberal education and the highest professional training? Do they realize that the one great and chief office of education should be to call forth and develop whatever spirit of originality, whatever element of genius, may lurk in the mind, and that this cannot be accomplished without our students acquiring the methods and habits of scientific research, and enjoying opportunities for the prosecution of such research, and abundant facilities in the way

of libraries, museums and laboratories? Is all this realized by our public men and by the people who pick them out from their fellows and send them as representatives to parliament? There can only be one answer to this question, but I will leave it to you, ladies and gentlemen, to determine what that answer is. The emphasis of public opinion in Canada cannot be said to be laid upon things of the mind. Observe the men picked out for honors by the multitude. The crack shot, the skilful oarsman, the valiant slugger. Were it otherwise, the saving remnant among us who prize the things of the mind and are jealous of the intellectual reputation of our country, would not be compelled to move heaven and earth to squeeze a few dollars out of the public coffers to promote the best interests of higher, liberal and professional education in the country. And if the money is voted, it is grudgingly voted, not in the belief that a splendid investment is being made. In reading the various reports of the members of the recent Moseley Educational Commission, nothing impressed me more than the intense belief of the Americans in education, the enthusiasm for it which is everywhere manifest, and the consequent willingness of government and people to pay for it, the amazing liberality of their wealthy men in promoting higher education, both liberal and professional. It is at least one characteristic of our neighbors which we can all admire without reservation. They have more money than we have, but they should not have more enthusiasm for learning and culture. I am an intense believer in the ability and stability of my own people. We have few failures in the medical profession in Canada, and fewer still who slide down hill and eventually join that unhappy class popularly known as the submerged tenth. My own experience leads me to believe that nearly every one who comes to our medical school has enough of the right stuff in him to enable him to be trained and instructed, and sent forth from our halls a good physician or a good surgeon. All cannot be great successes. Clever, successful men are, to a large extent, born, not made. But fresh and living and stimulating education, opportunities and facilities in the way of libraries, laboratories and museums for independent study and research, can go far to insuring a man's success—character and some native ability and aptitude for medicine being taken for granted. For these reasons I appeal to our public-spirited citizens, to those who appreciate the high value of the coherent and civic conception of education, to aid by their personal influence the creation of a public sentiment in this coun-

try more in favor of intellectual progress, of intellectual independence, more in favor of promoting the higher interests of professional learning, and chiefly of that profession which comes home inevitably to everyone sooner or later, the profession which, as I have said, is in many respects the criterion of a country's civilization. May I venture to go further and to say it is the duty of everyone who has mind enough to realize its importance, thus to exert his personal influence? The word "duty" has not always an agreeable sound, but it is, as the late Bishop Phillips Brooks once remarked, the one thing on earth that is so vital that it can go through death to come to glory.

Before I close I wish to offer some few remarks embodying the main reasons which induced the old Faculty of Trinity Medical College to join with that of the Provincial University. I regret with all sincerity the passing away of Trinity Medical College; she has done noble work in the past, and her record was one of continued success; her graduates, numbering upwards of two thousand, are scattered over the whole world. Many hold positions the foremost in the ranks of the medical profession; they are to be found in our legislative halls and in positions of public trust, and although Trinity Medical College exists no longer as a teaching body, yet her reputation survives and her graduates, from their high and distinguished positions, testify to the liberal education which they received at her hands. Our faculty, however, felt that the progress of medical education to-day was such that its demands could not any longer be supplied by private enterprise or by proprietary medical schools. The use of public and private funds is essential for the advancement of our science, and we could not expect these so long as we existed as a private corporation. We amalgamated relying on the hope that we will receive both government and private assistance, such is now so generously given to McGill and other great universities throughout the United States. Again, amalgamation was in a degree imposed upon us by the attitude and earnest desire of Trinity University, of which we were indirectly a part. For some years past we knew that federation with the Provincial University was the policy of Trinity University, and we realized that it would take place, and upon its consummation leave our students practically without a place for graduation, the only other places being London and Kingston, which had their own medical faculties. The Provincial University offered us liberal and honorable terms of amalgamation, assuring us that the professorial staff of teachers, the graduates and under-

graduates, would receive generous treatment. We realized that these were advantages which later on we might not have been able to secure. By the arrangement which has been entered into, all the graduates in medicine of Trinity secure enrolment and status in the Provincial University, enjoying the same rights as her own graduates in the selection of representation to the senate and governing bodies of the University.

In conclusion, I can but thank you for your patient hearing, and wish you all the most abundant success in the honorable calling which you have selected for your life's work.

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ADDRESS IN GYNECOLOGY.—THE SURGICAL  
TREATMENT OF COMPLETE DESCENT  
OF THE UTERUS.\*

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BY E. C. DUDLEY, M.D., CHICAGO, ILL.

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Complete descent of the uterus, descent to the third degree, which may be defined as that deviation in which a part or the whole of the uterus is outside of the vulva, is always associated with extensive injury to the pelvic fascia, the pelvic connective tissue, the muscles of the vaginal outlet, the perineum and the vaginal walls; in fact, these injuries of the pelvic floor constitute the essential lesion, the mal-location of the uterus being an incidental factor.

The uterus, in its normal position, lies across the pelvis, the fundus pointing in a slightly upward anterior direction and the external os in a slightly downward posterior direction. The long axis of the uterus in this normal direction makes an acute angle with the long axis of the vagina, which extends from the vulva upwards and backwards in the direction of the hollow of the sacrum. Generally speaking, mobile anteversion, with some degree of anteflexion, is the normal position of the uterus; at any rate, the uterus in its normal range of movements does not deviate, unless temporarily, beyond the limits of a certain normal anteversion and anteflexion.

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\*Read at the annual meeting of Canadian Medical Association Vancouver, B.C., August 24th, 1904.

In the etiology and treatment of descent the practical significance of this acute angle between the axis of the uterus and vagina is very great, because the uterus in the act of prolapse must descend through the vaginal canal in the direction of that canal, that is, a coincidence of the two axes is a prerequisite of descent. Now, if the essential condition of descent is a coincidence of the axes, it follows that one factor, at least, in the treatment of descent must be to restore the normal angle between the axes.

In labor the anterior wall of the vagina is so depressed, stretched and shortened by the advancing child that during and after the second stage the anterior lip of the cervix uteri may be seen behind the urethra. This location of the cervix—so close to the anterior wall of the pelvis—necessarily involves great stretching of the utero-sacral supports which normally hold the cervix uteri, and together with it the upper extremity of the vagina, close to the hollow of the sacrum. This function of the post-uterine ligaments having been temporarily impaired, the upper extremity of the vagina is displaced forward, so that the uterus, having sufficient space between itself and the sacrum, instead of maintaining its normal anterior position, may fall backward into retroversion, and thereby bring its own axis into line with the direction of the vagina. Frequently the change in the direction of the vagina from the normal oblique to the abnormal vertical is still further increased by injury to the vaginal outlet; the perineum may be torn in any direction, and what is more serious, it may be torn away from its pubic attachments and in this way may be displaced backwards towards the tip of the coccyx; in fact, such displacement is so common as the result of injuries to the perineum as to suggest the propriety of a change in terminology from laceration to displacement of the perineum. The upper extremity of the vagina being displaced forward and the lower extremity backward, and the direction of the over-stretched, dilated vagina now being vertical, the heavy uterus having its long axis in the same vertical direction, has all the conditions favorable to progressive descent.

If the puerperium progress favorably with prompt involution of the pelvic organs, and if the relaxed vesico-vaginal wall and other parts of the pelvic floor, especially the utero-sacral supports and the broad and round ligaments, recover their normal tone, then the whole pelvic floor, including the uterus, resumes its normal relations. But if the enlarged heavy uterus remain in the long axis of the vagina, and especially if the

fundus uteri be incarcerated under the promontory of the sacrum, with the sacral supports stretched so much and for so long a time that they cannot recover their contractile power, and if normal involution of the pelvic organs be arrested, then descent may not only persist, but may progress, with constantly increasing cystocele and rectocele until the entire uterus has extruded through the vulva.

It is most important to remember that complete prolapse of the uterus is only an incident to prolapse of the pelvic floor. The whole mechanism is that of hernia, and the condition is hernia, for the extruded hernial mass drags after it a peritoneal sac which, hernia-like, contains small intestines. This sac forces its way to the pelvic outlet and extrudes through the vulva, having the inverted vagina for a covering.

The prolapsing uterus may be related to the vaginal walls in either one of two ways: The prolapsing vaginal walls may drag the uterus down after it; or the uterus itself may descend along the vaginal canal by force of its own weight and drag with it the reduplicated vaginal walls. Extreme prolapse of the uterus, the organ being covered thus by reflected vaginal walls, has given rise to considerable confusion in pathology, and by many standard authors wrongly has been called hypertrophic elongation of the cervix uteri. In a given case, the possibility of infravaginal elongation may be settled easily by placing the patient in the knee-breast position, when the uterus of its own weight will fall toward the diaphragm, and the reduplicated vaginal walls will unfold and utero-vaginal attachment will appear in the normal place instead of being, as it seemed to be, high up on the walls of the uterus. Those cases in which reduplication of the vaginal walls does not almost entirely explain apparent great elongation of the cervix, are rare exceptions. When formerly these mechanical conditions were attributed to hypertrophic enlargement of the uterus itself, and were regarded as adequate indications for the removal of the cervix, the surgeon, in the attempt to remove what he supposed was the elongated cervix uteri, sometimes invaded the bladder anteriorly and the rectum posteriorly.

*Surgical Treatment.*—In passing it may be well to mention, for the purpose of condemning it, an operation perhaps more frequently performed than any other for the cure of complete descent, namely the operation which generally passes under the name of Stoltz. This operation is designed to narrow the vagina, and thus to maintain the uterus somewhere in the pelvis

above the constriction. Operations of this class usually consist of the removal of an elliptical piece from the anterior or posterior vaginal wall, or from both, and of closing the exposed surfaces by means of a purse-string suture. No effort is made to restore the normal axis of the uterus and vagina. The whole purpose is to make the vagina so narrow that the uterus cannot pass through it. Such operations generally fail, because they leave the uterus and vagina in the same axis, and because the restricted vagina cannot resist the downward force of the uterus, which almost invariably dilates the vagina a second time and forces its way through with reproduction of the hernia. Moreover, the operation always does permanent harm, because it shortens the vagina, thereby making it draw the cervix away from the sacrum towards the pubes so that the body of the uterus may have room to fall backward to the position of incurable retroversion. We may, without discussion, perhaps, throw out all operations belonging to the Stoltz group. The same may be said of all plastic operations in which the vaginal surfaces are exposed by superficial denudation and brought together by sutures.

After a prolonged trial of the principal surgical procedures which have been made use of for the cure of complete descent, I am prepared to lay down certain essential principles, as follows:

An efficient operation on the vaginal walls should have for its object, not narrowing the vagina, but restoring the normal direction of it with a double purpose so that (*a*) the upper extremity, together with the cervix uteri shall be in its normal location within an inch of the second and third sacral vertebrae, just where the utero-sacral ligaments would hold it if their normal tonicity and integrity could be restored, and so that (*b*) the lower extremity of the vagina shall be brought forward against the pubes. The fulfilment of these two indications will restore the normal obliquity of the vagina, and will hold the cervix uteri so far back toward the sacrum that the corpus uteri must be directed forward in its normal anterior position of mobile equilibrium. With these conditions, the uterus being at an acute angle with the vagina and having little space posteriorly, cannot retrovert and turn the necessary corner which would permit it to prolapse in the direction of the vaginal outlet. In order to accomplish this two things usually are necessary:

1. *Excision of the Cystocele (Anterior Colporrhaphy).*—

The plastic operations performed on the anterior and lateral walls of the vagina by Sims, Emmet, myself and others, which have consisted of superficial denudation and reefing of the anterior or lateral walls of the vagina, have only been partially successful, first, because they did not adequately force the cervix uteri into the hollow of the sacrum; second, because efficiency requires deeper work than superficial denudation can accomplish, and third, because these operations did not utilize the broad ligaments sufficiently for support.

The above principles, emphasized by Reynolds in a recent paper, have led me to modify my own operation materially. Complete prolapse, being hernia, should be treated according to the established principles of herniotomy, by reducing it and then excising the sac in such a way as to expose strong facial edges, which should be firmly united by sutures. The absurdity of treating any other hernia by superficial denudation and reefing or tucking in the surfaces by sewing them together, must be apparent to any one. In order to indicate the part which the broad ligaments must have in a correct operation, it is only necessary to observe the fact that vaginal hysterectomy commonly results in holding up the pelvic floor, and with it the rectum, vagina and bladder, because in this operation the broad ligaments are usually fixed to the vaginal wound. But why should not the same result be aimed at by similar means, even though the uterus is not removed? The operation which I would urge is performed as follows:

*Anterior Colporrhaphy.*—First step: To split the antero-vaginal wall—that is, the vaginal plate of the vesico-vaginal septum—by means of scissors, from the cervix uteri to the neck of the bladder, then to strip off the vaginal from the vesical layer of the vesico-vaginal wall and cut away the redundant part of the vaginal plate.

Second step: The redundant part of the vaginal wall having been removed to extend the incisions and remove the mucous and sub-mucous structures to either side of the uterus, being sure to reach the facial structures, which are in direct connection with the lower margins of the broad ligaments, or, what is better, to reach the ligaments themselves.

Third step: To introduce silkworm gut or chromic catgut sutures so that when tied they will draw the loose vaginal tissues and the broad ligament structures on either side of the cervix uteri in front of the cervix so as to force the cervix back into the hollow of the sacrum.

Fourth step: The sutures introduced in the third step having been tied, additional interrupted sutures are introduced to unite the vaginal wound from side to side; this suturing is continued to a point near the urethra, when most of the redundant vaginal wall will have been taken up; there will usually remain, however, the lower portion of the cystocele, and perhaps some urethrocele, which cannot be disposed of by bringing the margins of the wound together from side to side, but can be taken up by uniting the remaining part of the wound in a transverse direction.

Even at the risk of prolixity I repeat that it is essential to remove the entire thickness of the vaginal layer of the vesicovaginal septum.

*Contraindications to Elytrorrhaphy.*—Elytrorrhaphy is usually unnecessary, and therefore contraindicated, in descent of the first degree. The special province of the operation is in complete prolapse or procidentia, when associated with cystocele. The operation further is contraindicated by tumors and adhesions which render replacement and retention impossible, and in diseases of the uterus or its appendages, which demand their removal. When such contraindications do not exist, elytrorrhaphy and perineorrhaphy in a majority of cases are quite as effective, and therefore to be preferred to the more dangerous and mutilating operations of hysterectomy.

2. *Perineorrhaphy and Posterior Colporrhaphy.*—As already stated, it is most important to appreciate the fact that in nearly every case of procidentia the lower extremity of the vagina is displaced backward. This is consequent upon subinvolution of the pelvic floor, and especially upon subinvolution or rupture of the perineum or of some other portion of the vaginal outlet. Unless, therefore, the posterior wall of the vagina and the perineum can be brought forward to their normal location under the pubes, so as to give support to the anterior vaginal wall, the latter will fall again, will drag the uterus after it and the hernial protrusion (cystocele and prolapse) will be reproduced. The treatment, therefore, of procidentia must always include an adequate operation on the perineum, or, more comprehensively speaking, upon the posterior wall of the vaginal outlet. The operation must be performed so that it will carry the lower extremity of the vagina forward to the normal location close under the pubes; then, if the anterior colporrhaphy has been adequate and has carried the upper extremity backward, the whole vagina will have its normal oblique direction, and its

long axis will make the necessary acute angle to the long axis of the uterus.

*Hysterectomy*, if indicated, should be performed by the vaginal route. As an operation for procidentia, hysterectomy is open to the following comments: Procidentia, as already shown, is hernial descent, not merely of the uterus, but also of the vagina, bladder and rectum. Complete prolapse often occurs after the menopause, when the uterus has become an insignificant rudimentary organ, and therefore may be removed easily. Cases are numerous in which, after vaginal hysterectomy, the pelvic floor, and with it the vaginal walls, have protruded again through the vulva, a result which may be expected unless the operation has included anchorage of the upper end of the vagina to its normal location by stitching the severed ends of the broad ligaments into the wound made by removal of the uterus. The indications for perineorrhaphy as a supplement to hysterectomy is the same as after anterior elvtrorrhaphy.

As laid down in the foregoing paragraphs, the utilization of the broad ligaments is the essential factor in the treatment of complete procidentia. The operation of elvtrorrhaphy, above described, unfortunately either may fail to bring the lower edges of the broad ligaments sufficiently in front of the uterus to enable them to hold up the uterus and vagina, or the ligaments, having been stitched in front, the stitches may not hold. Consequently, in complete procidentia, elvtrorrhaphy, even though well performed, may fail; at least, this has been my experience in a number of cases. Therefore, the completely prolapsed uterus may have to be removed in order to secure the entire outside ends of the broad ligaments to the upper part of the vagina, and thereby give absolute support. As before stated, the operation should include the treatment of the hernial factor in the lesion, that is, removal of the redundant portion of the anterior vaginal wall. Generally speaking, the indications are somewhat as follows:

1. Extreme cystocele, not associated with the most extreme procidentia, should be treated by anterior colporrhaphy and perineorrhaphy.
2. Cystocele, associated with complete procidentia, properly may be treated by hysterectomy, anterior colporrhaphy and perineorrhaphy. Anterior colporrhaphy in all cases.
3. Conditions intermediate between the two conditions indicated above, and cases of very feeble or very aged women, will call for special judgment whether hysterectomy be omitted

or performed. It is, however, a fortunate fact that the completely prolapsed uterus, even in aged women, is removed usually with ease and with safety.

*Other Operations of Questionable Value.*—Other operations, designed to decrease the weight of the uterus by removal of a part of it, are of questionable value. Amputation of the cervix to lighten the weight of the uterus has been practised much for the spurious hypertrophic elongation already described. Since this condition is rare, if not indeed unknown, it follows that it seldom will furnish an indication for amputation of the cervix uteri.

Alexander's operation and abdominal hysterorrhaphy belong to the surgical treatment of retroversion and retroflexion, not of procidentia. The object of these operations is to suspend the uterus from above. Hysterorrhaphy, which perhaps fulfils this indication better than shortening the round ligaments, may be indicated in cases of extreme relaxation of the uterine supports and greatly increased weight of the uterus. The results of it in complete procidentia, however, usually will not be permanent unless it is supplemented by adequate surgery in the vagina.

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## SOME CASES ILLUSTRATING DIFFICULTIES IN THE DIAGNOSIS AND TREATMENT OF TUMORS.\*

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BY WM. OLDRIDGE, M.A., M.D.,

Surgeon to St. Michael's Hospital; Professor of Hygiene, and Associate Professor of Surgery  
in the University of Toronto

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(Continued from September issue.)

Case 3.—Miss —, a patient of Dr. Charlton, of Weston, was seen by me with him, on April 21st. She had profuse hemorrhage at times, and much pain in the lower part of the abdomen. Bimanual examination revealed a somewhat firm nodular mass extending rather more than midway up to the umbilicus. From the feel of it my diagnosis was fibro-myoma, in which I think Dr. Charlton concurred. We waited a few weeks, giving the patient such doses as she could tolerate of potassium iodide and

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\*Read before the Ontario Medical Association, June, 1904.

some uterine sedatives. No benefit resulting, I operated at St. Michael's Hospital on the 28th May, in company with Dr. Charlton, and on opening the abdomen we found a dark-looking cyst (*aa*, diagram C), from which, by means of a trocar and cannula, we drew off, I should judge, about twelve ounces of a tarry-looking fluid. This cyst and its situation and attachments are depicted on the diagram on the wall; it resembled a pair of uneven saddlebags or bundles (*aa*) striding the fundus (*b*) and broadly attached to the surface of the uterus on each side near the cornua, a intervening free space (*c*) occurring on the top of the fundus. You will see by the specimen which I pass around that the two ovaries—diseased, diminished and altered in shape—are distinct from the cyst, as also are the tubes; so that I take it the mass was parovarian, or arose in the broad ligament. It is curious that it should have been attached to both sides, necessitating the tying off of a pedicle on each side.

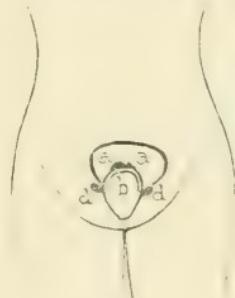


DIAGRAM C

There was a good deal of intestinal adhesion. The uterus was somewhat enlarged; it was also darkish-looking, but we thought this partly due to staining and hyperemia, and considered that it was not necessary to remove the uterus, especially as we would get the physiological result of the removal of the ovaries.

We may call Cases 4, 5 and 6, the three specimens which I pass around, which are old ones, and which I merely show for the purpose of pointing out how easy it was to think that in the case just related we had a fibro-myoma with breaking down cysts, such as that shown in one of these specimens.

**Case 7.**—I did not see the patient until she was sitting on the operating table. She had three paracenteses, supposedly for ascites, in the five months before I saw her. And one of our most accurate physicians telephoned me asking me to make the

section under local anesthesia for tubercular peritonitic effusion, the dyspnea being too great for the patient to lie down. I rendered the tissues of the abdominal wall insensitive by the hypodermic and endermic use of a Schleich's solution, divided cautiously the adherent layers until I came down upon what I believed was a cyst wall; this was separated from the abdominal wall to the extent of two or three inches and was aspirated; and later, by a large cannula, some quarts of fluid were drawn off; the patient's breathing being so much relieved that she could lie down, a general anesthetic was given, and I removed the cyst (or cysts, for the mass was multilocular), and as there was much bleeding on separating it from the surface of the uterus, I did a hysterectomy as well. Dr. Parent, then house surgeon, who assisted me in the case, thought the fluid collected and that lost would amount to sixteen quarts, but I think it could hardly have been so much, probably twelve quarts. I was to have shown this specimen at the last meeting of the Association, but had to leave town just previously to the meeting, owing to illness in my family, and now take occasion to apologize. I may add that the local anesthesia was so successful that the patient begged me after I had drawn three inches of sac out, to complete the operation without chloroform. I also wish to say that the left ovary and tube had been removed three years previously by the late Dr. Sweetnam.

Case 8.—I now pass around a photograph (taken, I am sorry to say, in poor light) of a tumor apparently of the breast, but only apparently, as it overlay the nipple. Here the question was, Sarcoma or carcinoma? On the side of the former were: eight years since first observed, though growing more rapidly of late; great vascularity; the bluish, glazed appearance; some of it looked like keloid tissue. On the side of carcinoma: a certain hardness and the fact that the woman stated the growth had commenced in the skin; but we thought it might have been just beneath. She said it had grown slowly for about four years, and at the end of that time was of the size and appearance of a common blue plum; then somewhat more rapid growth for the next two and a half years, and much more rapid for the last one and a half years. No axillary or peri-clavicular glands perceptible. Seeing a large number of veins from it, I asked the presiding genius of the operating-room to provide double the number of forceps ordinarily used in such operations, and I used them all but two—not waiting to tie vessels which needed only temporary attention.

I would draw attention to a little plastic device for closing the wound, depicted in the diagram (*D*). The portion (*a*) colored red, shows the space left uncovered after drawing the edges together; to close this I made an incision obliquely through the outer flap outward and downward, and this enabled us to draw the tongue (*t*) over this raw surface, and the gap was filled by drawing the edge (*d*) into it, the tongue (*t*) having been drawn over to *f-d*. This is hard to understand by a diagram, but we know how pliable and plastic skin is. The vitality of the flap was threatened after a day or two, but was encouraged and maintained by warm boric dressings, and an edge to edge union took place. The axilla was not invaded; two glandular nodules of the size of an almond and a white bean, respectively, were removed

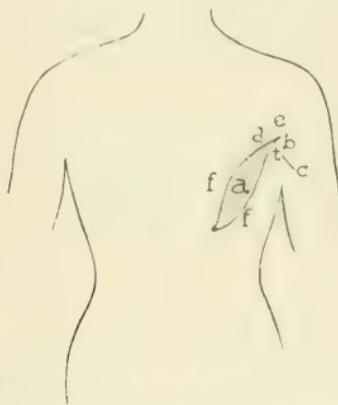


DIAGRAM D.

from a position near the outer side of the mass at the time of operation. No recurrence had taken place two months later, but the patient has, during the intervening four months, not attended to my request to report.

To Dr. H. B. Anderson I am indebted for the final diagnosis. He has designated the tumor "malignant adenoma," and has the specimen and microscopic sections on the table today.

**Case 9.**—I also pass around a photograph of a case of doubtful diagnosis as between sarcoma and specific gumma of the tibia. Absence of the uvula, destroyed by disease, and the lines at the angle of the mouth, shown in the other photograph,

clear up the doubt, as also tolerance of large doses of potassium iodide, one-half drachm doses.

Cases 10, 11 and 12.—In conclusion, I present some specimens of gall-stones in which there was room for the exercise of care in clearing up doubtful diagnosis. In one of them, seen and operated upon with Dr. Kerr, of this city, there was a movable kidney which complicated the diagnosis; in the other case, a question of malignancy. Each has had an uneventful recovery. In the same month I saw a case where a diagnosis of gall-stones had been made, but which I believe to be a movable kidney—illustrating the same difficulties alluded to yesterday in the discussion by Dr. H. A. MacCallum of Dr. Hodge's paper. The difference in color and degree of smoothness of the two sets of gall-stones shown is worthy of notice. In the polished light brown set the obstruction was in the cystic duct; in the dark green rough ones, the large one (about two centimetres) closed the entrance for bile to the common duct.

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## "THE OPERATIVE TREATMENT OF PROSTATIC HYPERSTROPHY."\*

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BY INGERSOLL OLMSTED, M.D., HAMILTON, ONT.

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Of the 426 cases of prostatic disease which came to his clinic, Hartmann operated 36 times with two deaths, being a mortality of 5.7 per cent. Of these two fatal cases, one was that of a man 84 years old, on whom he had done the suprapubic operation, and who died from the accidents of senile dementia. The other, a man of 59 years who, before the operation, showed very grave renal lesions, succumbed to urinous cachexia after a perineal prostatectomy. These two deaths must be attributed to other circumstances than the intervention. Hartmann considers the prostatectomy as one of the least dangerous of surgical operations. The only complications observed have been the production of a recto-uretral fistula, an avoidable accident with good technic, and the secondary development of an orchitis.

With regard to results, the patients have been, if not completely relieved of their troubles, at least very much improved.

\*Abstract from paper in *Revue de Chirurgie* (Sept. 10th, 1904), delivered by Dr. H. Hartmann before Société de Chirurgie.

In all cases where there was fever before the operation, this fell immediately, even the first evening after the operation. The urines previously infected cleared up markedly from the following day. The digestive disturbances disappeared. As to the more remote results the cases have varied some. Three operations of Bottini have given but mediocre results. Of six hypogastric prostatectomies, two are still too recent; of the other four, three have given an excellent result; normal urination, clear urine, no residue after five months, a year, and two years. Once the total enucleation of the prostate was effected hypogastrically, once the ablation of a middle sized lobe and removal of a small calculus, and once the excision of a wedge of prostate at the posterior part of the neck. In the fourth case, when a wedge had been removed, there was a residue of 50 grammes of slightly turbid urine.

The perineal prostatectomies may be divided into three classes:

1. Complete retention of urine of comparatively recent date, nine cases; of these, one is of too recent date, and another has been lost view of. Of the seven remaining cases, two had had febrile crisis, which disappeared the same day, even of the operation, and all the patients have urinated normally since. Such was the case also in four other cases which were removed *en bloc* by enucleation. In the last case where the prostate was removed (piece-meal) in pieces, the patient had a residue of 300 cubic centimetres (10 oz.).

2. Complete retention of long standing, six cases. In one case the patient could empty his bladder only by means of a catheter, which he had employed for five years. The perineal prostatectomy by enucleation was followed by complete return of the power of micturition. In the five other cases the prostate was removed piece-meal. In the first the removal was incomplete and 180 c.cm. (6 oz.) of residual urine remained; in the other incomplete retention persisted. The five other cases operated on by enucleation have had their condition improved, and the amount of their residual urine decreased markedly.

The age of patients does not seem to have much influence on the operative results. The volume of the gland makes little difference. It is not so, however, with the anatomic condition of the gland, for, as a rule, the cases in which the prostate may be enucleated *en bloc* appear to give better functional results than those where the anatomic state necessitates its removal by piece-meal.

As to operative technic, Hartmann does not confine himself to the hypogastric method, by which he has done only a small

number of cases, but explains carefully the perineal ablation of the prostate. This is divided under two heads: (a) the exposure of the posterior surface of the prostate; (b) the removal of the prostate.

(a) By a curved incision, extending from one ischium to the other, encircling the anterior part of the anus, the skin, subcutaneous cellular tissue, and the anterior attachments of the sphincter are divided, and the bulb of the urethra cleared around its posterior border. The membranous urethra is reached, in which a grooved sound has been placed, which form a landmark in the bottom of the wound. This is now freed with the knife, and the muscular tissue at the back part, which attaches it to the rectum (the recto-urethral muscle) is divided transversely. The retractor of Proust is placed in the front part of the wound behind the bulb of the urethra, its two branches embracing the canal, and retracted, and then one continues to advance deeply into the wound until the bowel is felt to be separated from the base of the bladder behind. The finger is then shoved forcibly to the right and left, thus retracing the anterior fibres of the levatores, and one enters with ease in the cellular space behind the prostate.

A small buttonhole-like opening is now made in the urethra, at the base of the prostate, and he inserts into the bladder Young's retractor, which is then opened, and with which the prostate is forcibly drawn down into the wound. An incision is then made through the capsule of the prostate over each lobe, and each of the lobes is then successively enucleated. They are only removed piece-meal when enucleation is impossible. The operation is terminated by placing a large rubber drainage tube into the bladder, allowing the outer end to emerge by one of the lateral ends of the wound, and the deeper divided parts are brought together with sutures. The tube is removed on the sixth day and a retention catheter is placed in, which remains till the twelfth day.

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### THE VOMITING OF PREGNANCY.

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By F. W. E. BURNHAM, M.D., C.M., WINNIPEG.

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There is perhaps hardly a symptom common to so many pathological conditions, and possibly without exception, none so

distressing as vomiting. Few medical subjects can, therefore, be of greater interest than this frequently occurring symptom.

It is well known that our susceptibilities in this direction are more dependent upon individual idiosyncrasy than upon any particular condition of the stomach itself. There are those who, no matter what is wrong with them, never vomit, and there are others who vomit on the slightest provocation. There are those suffering from carcinoma of the stomach, and from various forms of dyspepsia, who can take the most nauseating mixtures without inconvenience. It would be expected, then, that the vomiting of pregnancy would be severest in those particularly susceptible to vomiting; but in this we are disappointed. Those who are most severely affected during gestation are not those who have been particularly susceptible, and frequently those who turn sick on the slightest provocation pass through gestation without experiencing the slightest gastric distress, while others there are who experience nausea and vomiting for the first time during pregnancy, and then in its severest form. Susceptibility to vomiting in general, therefore, is not a predisposing factor in the causation of this particular variety.

The fact that a multitude of remedies and procedures have been tried in its treatment goes to show that no one has yet shown in what way the vomiting is brought about. In those who succumb to the pernicious variety, no more is found than in the functional diseases of the nervous system.

In attempting to discover the cause of this affection, no one has yet got beyond the conception of an hypothesis. If it is due to reflex action, the conditions which are responsible for the uncontrollable action of the reflex loop are not known. The controllable and uncontrollable vomiting of pregnancy are spoken of, but such a thing as the controllable vomiting of pregnancy does not exist. It is true that the vomiting frequently ceases during the administration of some medicinal agent, but it does so in spite of it rather than as a result of it. That vomiting ceases as frequently without as during the administration of drugs, goes to show the uselessness of their exhibition in these cases.

As women differ in their susceptibility to vomiting, they differ in their susceptibility to the pregnant state in general. Some never feel so well as when they are pregnant, others never feel so badly. The vomiting occurring during and because of pregnancy must be distinguished from the vomiting occurring in pregnancy, the result of conditions which would have produced it had pregnancy not been present. As the pathological conditions

are numerous in which this symptom is present, it would be improper to treat as the vomiting of pregnancy that which would have caused it had pregnancy not existed, so that to find the cause of it during gestation at times requires considerable diagnostic acumen.

Vomiting occurring when the stomach is empty, or which though it occurs at other times is most frequent and distressing, then, as in the morning sickness of pregnant women, may be safely put down as arising not from any fault of the stomach itself. Graily Hewitt attempted to prove, as the result of his own investigations, and those of Horwitz, of St. Petersburg, that the cause was always to be found in displacement of the uterus. In twenty-seven out of twenty-eight cases, minor displacement was found. He, therefore, concluded that the displacement interfering with normal expansion and growth was the cause of the vomiting.

This brings up the question of the normal position of the uterus, and the effects of the so-called minor displacements. To determine the most usual position of the uterus, Vedeler of Stockholm, examined 3,012 women, and found it anteverted or anteflexed in 66 per cent., retroflexed or retroverted in 18 per cent., and in 15 per cent. the uterus was in the position which is usually described as the normal. So that the various ills which have been attributed to the minor displacements of the uterus are, in the main, fictitious.

Adding to Vedeler's findings the facts that the vomiting of pregnancy is not commoner in those with the so-called minor displacements, than in those with the uterus in the normal position, and also where displacement exists, the reduction of it does not relieve the vomiting, seem to show that the cause is not to be found in the position of the uterus. In those who commence vomiting within a week or two of conception, it cannot be said that in these at least there was present a condition which interfered with the normal expansion of the organ. There are cases of severe vomiting of pregnancy without any malposition, and without any ascertainable cause than the pregnancy, either ante- or post-mortem.

A hyperesthetic condition of the os is found frequently enough to lead some to believe it to be the cause. The relief of this hyperesthesia, though at times followed by improvement, cannot be said to be sufficiently successful to warrant placing any confidence in it as a curative measure; but that partial cessation of the vomiting follows the removal of this hyperesthetic con-

dition, would indicate that it may at least be a contributory cause. Therefore, having a normal stomach, and apparently a normal uterus, both ends of the reflex loop being microscopically and macroscopically healthy, what more plausible hypothesis than the neurotic can be advanced in explanation of the cause of this affection?

Some writers go so far as to state that all cases are hysterical. While admitting that hysteria is a factor in its causation which must always be taken into account, I cannot concede that it is the cause in any considerable proportion of the cases. It occurs persistently in those who cannot be said to be of an hysterical or neurasthenic disposition. There is no explanation for the strange manifestations of hysteria, and while at times they appear where least expected, it is too often customary to credit this affection with conditions, which, for the time, are otherwise unaccountable. The success of a particular treatment is frequently of assistance in suggesting the cause. There is nothing to be hoped for in this direction, as all forms of treatment are equally unsuccessful, either in stopping the vomiting or in alleviating the symptoms.

To explain the vomiting, which occurs in the later months of pregnancy, it is necessary to draw upon the imagination. This form can only be explained on the theory of an auto-intoxication peculiar to the pregnant state. That substances exist in the circulation which are peculiar to gestation, or which if occurring at other times, are so modified as only to produce symptoms, then, is, I think, recognized.

Of all the remedies which have been tried from time to time for this condition, none has been found effectual, and it is a significant commentary on the art of medicine that remedies, which were supposed to be effectual in controlling the condition but a few years ago, have been discarded, and are no longer in use.

Treatment is not necessary in all cases. There are those who only experience a temporary inconvenience, and whose general condition is well maintained. There are others, who become so reduced that it is doubtful if they could reach full term, or, if in reaching it, have the strength to undergo parturition, on account of the very depressed and exhausted state of the system. Between these two there is every gradation. Where there exists a hyperesthetic condition of the cervix the application of a strong solution of cocaine is based upon rational ground, and is effectual at times in ameliorating the condition. Copeman advocated dilatation of the cervix, and was successful in a number of cases. In only one case have I found it successful. In

this instance it was followed by immediate and permanent relief, but failed in all subsequent cases.

Hennig, writing in the *Munchener Wochenschrift*, regards the condition as a neurosis, and has rarely found dilatation successful. In those of a decidedly hysterical tendency success may follow a profound mental impression. I have succeeded in obtaining immediate relief in a young primipara with severe vomiting by threatening operative procedure. But all these will fail in the majority of severe cases. When other measures have failed, and the exhaustion of the patient cannot be arrested, the only remedy is the emptying of the uterus. This should never be delayed so long as to put the patient in a state of imminent peril. It must always be remembered that the nausea, which is incessant in these cases, is equally as pernicious as the vomiting, so that the frequency of vomiting may not be a good guide in estimating the gravity of the case. The presence or absence of nausea is an all-important fact. Speaking in a general way the patient who vomits frequently without nausea in the intervals will not lose so rapidly as the one with incessant nausea.

In a patient with vomiting of pregnancy the uterus should be emptied before the patient reaches that state of exhaustion that death follows even after labor is induced. Paul Dubois met with twenty fatal cases in thirteen years. That such cases with a removable cause so frequently terminate fatally is a reproach to medicine. Each case must be considered on its merits. A degree of vomiting, which in one individual causes a slow physical decline, would in another of less resisting power be rapidly destructive. In the severe cases it is customary to view too seriously the responsibility assumed in sacrificing the fetus, forgetting altogether the danger in which the mother is placed so long as the cause remains. In the case of a first child, in a woman near the menopause, or where great interests are involved, such as succession to a title or estate, the retention of the fetus until viable may be urgently desired. But in the majority of severe cases the distress is so acute and the conditions so alarming that radical treatment is favored or demanded, and any failure on the part of the medical attendant to grasp the seriousness of the situation should be viewed as a grave dereliction of duty. The ultra conservative treatment of the severe vomiting of pregnancy in deferring operative measures until the patient becomes so reduced that she may die, even though labor be induced, is not demanded by any feelings of humanity, and is certainly opposed to the spirit of progressive medicine.

**CANADIAN MEDICAL ASSOCIATION.—ADDRESS OF WELCOME.**

By J. C. DAVIE, M.D., VICTORIA, B.C.

Vice-President British Columbia Medical Council.

*Mr. President and Gentlemen.*—In the absence of Dr. Proctor, the President of the Medical Council of British Columbia, which Council is the representative body of the medical profession in this Province, it becomes my pleasing duty, as Vice-President, to welcome to British Columbia, and especially to the City of Vancouver, the members of the Canadian Medical Association.

This is the first meeting of the Canadian Medical Association held in British Columbia, the most western Province of the Dominion of Canada, and we are extremely pleased to see so numerous and representative a body of the profession present.

Here in British Columbia we have to grapple with the same diseases and difficulties that present themselves in Europe and other centres of civilization. We operate on the brain and chest; do hysterectomies; operate on the stomach, intestines, gall-bladder and its ducts; on the ovaries and fallopian tubes; on the kidneys and urinary bladder, etc.; in short, we have recourse to all the recognized surgical procedures of our time, and by the aid of the teachings of Lord Lister do our work with wonderful success. Inspired by the spirit of the west, acute septic peritonitis, from whatever cause arising, was early treated in British Columbia by promptly performed abdominal section; and we soon learned by clinical experience that early excision of the vermiciform appendix was the safest way of treating this dangerous little organ when it became diseased.

Some of us have been astonished to find that in some parts of Europe the advisability of prompt operation in appendicitis is still a question of great divergence of opinion. Recent literature, however, shows a decided tendency towards the adoption of the views held generally by the profession on this continent.

As a result of the abdominal sections which I have performed, one fact has been made apparent to me. No doubt the same thing is well known to most surgeons, though I think sufficient attention has not been called to this subject, viz., the comparative frequency of enteroptosis in women as compared with men. It is a common thing to find, upon opening the abdomen of a

woman, too movable a condition of the liver, the stomach entirely too low in position, its greater curvature below the umbilicus, the transverse colon below the same point, one or both kidneys abnormally movable, and the uterus and appendages crowded down out of place. The result of these displacements I need not dwell upon. It has not been my experience to find anything approaching such a condition of the abdominal organs in men, and one is driven to the conclusion that enteroptosis in women depends to a very great extent upon their methods of dress—the chief offending factor being that abomination, the corset.

Looking back fifty years or less at the work done by medical men at that time, one cannot fail to be struck by the immense advances made in all branches of our profession. Bacteriology was then unknown, with all the daylight it has thrown upon diseased process. Clean, and, therefore, successful, surgery did not exist, and little had been done in that greatest and most promising of all branches of our work, preventive medicine. Without doubt, we are inclined to look upon the knowledge of our predecessors as meagre and of little account in comparison with our own ; yet it requires no stretch of the imagination to picture the members of our profession fifty or one hundred years hence, in their turn, looking back at us and wondering at our ignorance and want of knowledge.

It happens only occasionally that a man of sufficient originality of mind arises, like Pasteur, to discover the part which bacteriology plays in disease ; or, again, like Lord Lister, to establish the simple fact that the unkind behavior of wounds is dependent upon their invasion by germs ; or, again, like Lawson Tait, to give us clear ideas concerning tubal pregnancy and the pelvic diseases of women, and to demonstrate that the peritoneal cavity is the safest part of the body for surgical work instead of the most dangerous.

We cannot too greatly honor these men; the whole world is in debt to them—we medical men more than anyone else.

Other problems remain, requiring elucidation, amongst which is that of cancer—the *bête noir* of our profession. This requires another man of genius to dissipate the mystery of it, to tell us what it is, and to give us a remedy.

Meetings of the medical and surgical associations of large districts and countries are most useful. At these meetings the most advanced ideas upon all subjects connected with our profession are brought forward and discussed, and reports of such views and discussions are placed before the world in the periodical

literature of the day, thereby adding to the knowledge of the profession throughout the world.

That this meeting will be one of great interest and instruction to us all I am confident ; the presence of so many men of eminence in the profession assures its success.

Again, in the name of the medical profession of British Columbia, I beg to extend our most hearty and cordial welcome to our visitors.

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**CANADIAN MEDICAL ASSOCIATION, VANCOUVER,**  
**AUGUST 23 TO 26, 1904.—REPORTS OF**  
**COMMITTEES.**

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**REPORT OF COMMITTEE ON PUBLIC HEALTH.**

*To the President and Members of the Canadian Medical Association:*

Gentlemen,—Your committee in charge of the question of the establishment of a Department of Public Health by the Dominion Government, have the honor to report that the matter has, to a certain extent, been in abeyance since our meeting at London last year. At that meeting, you will recollect, we reported certain interviews with the Prime Minister and the Minister of Agriculture, at which we were led to understand that it was not feasible for the Government to give us any assurance that our wishes in the matter could be practically considered. The resolutions again passed at London, pressing the subject on the attention of the Government as one closely associated with the country's welfare and best interests, were duly forwarded to the Dominion authorities.

It was also pointed out to the Hon. the Minister of Agriculture by the Convener of your committee that the medical profession were united in their desire to have such a department created, and that they were only actuated in the matter by motives of patriotism, feeling assured that the administration of public health in matters pertaining to the Dominion Government would be greatly facilitated and rendered more useful and satisfactory if it emanated from a central department, instead of having a series of branches having executive authority scattered through a number of departments of the Government.

Your committee are gratified to be able to report that there are evidences that, during the present recess, the matter will engage the attention of the Privy Council more seriously than it has hitherto done. Before legislation could be introduced, certain questions involving much consideration will have to be settled, and we are given to understand that these preliminaries will be weighed before Parliament meets. While it is to a certain extent unsatisfactory to be obliged to report in such an indefinite way, yet we trust the Association will understand that we have not been idle, but that in a matter of this kind we are in the hands of the good-will of the Government, and that it would be neither judicious nor delicate to compromise the present favorable opportunity by referring in detail to the reasons that have enabled us to hazard our present opinions.

Respectfully submitted,

(Sgd.) R. W. POWELL,

*Convener of Special Committee.*

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#### RESOLUTION *re* PUBLIC HEALTH.

Moved by Dr. H. A. Lafleur, Montreal, seconded by D. O. M. Jones, Victoria, and

*Resolved*.—That the Canadian Medical Association regret that the Dominion Government have not yet seen their way clear to carrying out the suggestions contained in the several strong resolutions of this Association passed during the past three years on the question of the establishment of a Department of Public Health under one of the existing Ministers of the Crown.

That it be further resolved that this Association continue to press the wishes of the medical profession of the Dominion on this subject on the attention of the Government, inasmuch as we feel sure that the difficulties to be overcome in order to bring about such a desirable end are of small consequence to the public welfare compared to the beneficial results that will follow.

That the sub-committee in charge of this matter be re-appointed at this meeting and requested to continue their efforts of the past three years.

That a copy of this resolution be sent by the General Secretary to the Rt. Hon. the Prime Minister, to the Hon. the Minister of Agriculture and to the Hon. the Secretary of State.

REPORT OF GENERAL SECRETARY OF THE THIRTY-SIXTH  
ANNUAL MEETING, HELD AT LONDON, ONTARIO,  
AUGUST 25TH TO 28TH, 1903.

The Constitution and By-Laws of the Canadian Medical Association require a report from the Secretary of the last annual meeting. Inasmuch as my report last year was referred to as being notable for its "brevity," I thought to make this one a trifle more extensive; and in so doing, in order to impress upon you the splendid growth in membership and in attendance at the annual meetings, will present some statistics.

The first decade after the organization of the Association in 1867, shows an average attendance of 71; the second decade, from 1877-1887, shows an average attendance of 74.8; the third, 107.6; whilst the average attendance for the past seven years is 139.1.

At the annual meeting last year, 303 names were entered on the Treasurer's register. That was the second largest meeting up to that time, being only exceeded in attendance by the meeting in Montreal the previous year, when 341 names were inscribed. The third largest meeting was in Toronto, in 1899, when 242 were present.

At the annual meeting last year 111 new members were admitted, and there were present 83 members of the profession who did not seek membership in our Association. This number is so large that I consider it important to call your attention to the fact that the mere signing of the Treasurer's book and paying the annual fee, does not constitute membership in the Association, but what is required is nomination on the regular application for membership forms, approval by the Executive Committee, and election at a general session. By this process alone will your name be inscribed in the Secretary's register of members.

It is very gratifying to record the large attendance at London last year, 303, and especially so in comparison with previous meetings in that city. It was the third time that a meeting had convened in London, the former occasions being 1880 and 1894. In 1880 the attendance was 60; in 1894 it was 92—five times more than in 1880 and over three times more than in 1894.

These figures emphasize, I think, the importance of Canada's national medical organization to the profession of this country, and certainly mark continued growth from year to year. I feel sanguine enough to prophesy that the attendance will never again go below the two hundred mark, if, indeed, it does not con-

time for the next five years to stay around the three hundred mark or mount upwards.

Bearing this in mind, remembering the great, good work it has done in the past — perhaps the most important, to ourselves, at all events, being the organization of the Canadian Medical Protective Association—I cannot but feel that it is time that the Canadian Medical Association be reorganized on the lines of the British Medical and American Medical Associations, so that we will be able to present a stronger and a more united body in the prosecution of work which lies before us.

We have in Canada provincial, county, district and city societies, which could readily and easily be made branches of the Canadian Medical Association. Our provinces all have medical councils, whose territorial representatives would, no doubt, undertake to organize their districts into branches. In this way, systematically organized, the Canadian Medical Association would be made a power in promoting legislation and in restricting the exploitation of a class denominated "quacks," who in this keen commercial age are very often sharp, shrewd business men, having behind them, frequently, strong financial force.

The attendance at our two last meetings, coupled with the practice of economy, has made for the Association a bank balance of some \$550. This gives us a working capital. Surely it would be well for this Association to authorize its officers, or a special committee, to undertake the publication of an annual volume of transactions. Towards financing this, I would suggest that the Treasurer be authorized to render an account to each member on the Secretary's register, on the first of January of each year, for that year's membership fee. Surely no one would refuse to pay this fee annually, promptly, for a bound copy of the annual transactions of this Association. At any rate it is time this matter was taken up with serious consideration.

This report, and the suggestions embodied therein, are respectfully submitted to you for your attention and consideration.

(Sgd.) GEORGE ELLIOTT,

General Secretary.

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#### RESOLUTION *re* TUBERCULOSIS.

Moved by Dr. R. E. McKechnie, Vancouver; seconded by Dr. R. Eden Walker, New Westminster:

*Whereas*, Tuberculosis has been positively proved to be an infectious disease; *Whereas*, the patient is the focus of the in-

fection and is capable of infecting, and does infect, dwellings, clothing, and private and public places generally; *Whereas*, statistics already available prove that compulsory notification of such cases, with educational oversight of the patient and those under exposure to the contagion, together with disinfection of the infected materials and places has resulted in a diminution of the number of cases; *Whereas*, the results of preventive medicine have been wonderful in other infectious diseases, and the same methods promise equally as great results in this disease; *Whereas*, such action, in the Dominion of Canada, lies with the various Provincial Governments:

*Therefore be it resolved*,—That the various provincial authorities be and hereby are urged to at once take the necessary steps to bring these suggestions into effect, and that the Secretary be requested to forward copies of this resolution to the Secretaries of the various Provincial Boards of Health, with the request that they lay them before the proper authorities.

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#### RESOLUTION re DOMINION REGISTRATION.

The Dominion Medical Association regrets that the present mode of registration, so often and so emphatically condemned by the entire profession, still continues in force. We regret the absence of Dr. Roddick from this meeting, and thank him for his great and persistent efforts to effect a change in the method of registration. We think the time has arrived when the profession should in every way take a more active interest and demand in a most emphatic manner the change. From no part of the Dominion can this united effort emanate than from this charming, fast-growing and resourceful city. We think a small committee should at once be formed in each province to confer with Dr. Roddick and to devise any means which may be agreed on to effect this long-desired object. Let this Association memorialize the Legislature of the Province of Quebec to pass the necessary legislation to legalize the Canada Medical Act, popularly known as the Roddick Bill, and that the Secretary set forth on said memorial the many reasons which have been so strongly advanced at the meeting why it should be done, and further, that an appeal be made by the Association to the College of Physicians and Surgeons of Quebec to use their all-powerful influence to have the legislation passed, and that a copy of the resolution be forwarded to the various papers in the Province of Quebec for publication. Resolution carried.

## The Physician's Library

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*The Perpetual Visiting and Pocket Reference Book.* Dios Chemical Company, St. Louis.

This weekly call list includes information in emergencies from standard authors. Any one can get a copy by writing the company as above.

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*The Medical News Visiting List for 1905.* Philadelphia and New York: Lea Brothers & Co., Publishers.

This is an invaluable, pocket-sized, wallet-shaped book, containing memoranda and data important for every physician, and ruled blanks for recording every detail in practice. It is in its nineteenth year of issue. It is issued in four styles to meet the requirements of every practitioner, weekly, monthly, perpetual, and sixty patients.

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*Essentials of Anatomy;* including the Anatomy of the Viscera. By CHARLES B. NANCREDE, M.D., Professor of Surgery and Clinical Surgery in the University of Michigan, Ann Arbor. Seventh edition, thoroughly revised. 12mo volume of 419 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$1.00 net.

This work, now in its seventh edition, has met with a most cordial reception. In this revision the entire book has been carefully gone over and the section on the Nervous System completely rewritten. The illustrations throughout the text are excellent, showing the anatomy of various parts with unusual clearness. Students, and indeed young practitioners, will find the work of great service.

*Adenoids.* By WYATT WINGRAVE, M.D., Physician and Pathologist, Central London Throat and Ear Hospital; late President British Laryngological, Rhinological and Otological Association. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. Crown 8vo, 128 pages, 32 illustrations. Price 2s. 6d.

The ninth of the series of medical monographs, edited by David Walsh, M.D., proves a most interesting addition to the literature on this subject. Special attention has been paid to the anatomy, pathology and morphology of adenoids, the details of operative procedure are emphasized, and an interesting chapter on anaesthetics, by Mr. Hotten George, has been added at the end of the work.

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*Diseases of the Stomach and Intestines* (being lectures to general practitioners), with an account of their relations to other diseases, and of the most recent methods applicable to the diagnosis and treatment of them in general; also the "Gastro-Intestinal Clinic," in which all such diseases are separately considered. By BROADMAN REED, M.D., Professor of Diseases of the Gastro-Intestinal Tract, Hygiene and Climatology in the Department of Medicine of Temple College, Philadelphia; Attending Physician to the Samaritan Hospital; Member of the American Medical Association, American Climatological Association, American Academy of Medicine, American Electro-Therapeutic Association; Foreign Member of the French Société d'Electrothérapie, etc. Illustrated. New York: E. B. Treat & Company.

This a modern, up-to-date book, which will be welcomed by the general profession on account of the author's well-known abilities in this direction. It is an octavo volume of 1,024 pages, and embraces a full account of the simplest and least disturbing methods of determining the character of the motor, secretory and excretory work of the principal organs having a part in the process of digestion and metabolism. It also includes indications for the various forms of electricity, X-rays, massage, vibrating stimulation, hydrotherapy, gymnastics, liquid medication, medical and surgical treatment, etc., and in addition contains "The Gastro-Intestinal Clinic," in which the diagnosis and treatment of all the known diseases of the tract are separately considered. We bespeak for the book a hearty welcome from general practitioners.

*Dwight's Epitome of Toxicology.* A Manual for Students and Practitioners. By E. W. DWIGHT, M.D., Instructor in Legal Medicine, Harvard University. In one 12mo volume of 298 pages. Cloth, \$1.00 net. Lea's Series of Medical Epitomes. Edited by V. C. Pedersen, M.D. Philadelphia and New York: Lea Brothers & Co., publishers, 1904.

This little volume is the outcome of a persistent demand for a small, compendious manual covering the essentials of toxicology—one that shall be trustworthy and modern, adapted to the needs of medical students and practitioners, and within at a moderate price. Some idea of the thoroughness with which the author has covered his subject may be obtained from the following brief of contents. After a section on the general principles of toxicology the subjects are taken up as follows: Irritant Poisons, Specific Irritants; Metallic Irritants; Vegetable Irritants; Animal Irritants; Poisonous Foods; Cerebral Neurotics; Spinal and Cerebro-spinal Neurotics; Depressants; Asthenics; Ptomaines, etc.

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*Normal Histology.* By EDWARD K. DUNHAM, Ph.B., M.D., Professor of General Pathology, Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. Third edition. Illustrated with 260 engravings. Price, \$2.75 net. New York and Philadelphia: Lea Brothers & Co.

In the author's preface to the third edition, he says: "In order to accomplish the greatest amount of instruction under these circumstances" (conditions which require economy of time) "it seemed necessary to present, early in the course, certain generalizations which might be kept constantly in mind and assist the memory in retaining facts by showing their logical correlation." Having to do with the teaching of medical classes, this idea appeals to us, and predisposes us to a kindly feeling toward this very admirable work. It is not the amount of bald information which a student acquires in the form of so many facts which is going to be of the greatest service to him, but rather a knowledge of how to assimilate certain information; in other words, the student should be taught more to think for himself, and particularly *how* to think.

The arrangement of this work is admirable, and the work is one which is likely to become very popular as a text-book.

*Essentials of Bacteriology.* By M. V. BALL, M.D., formerly Resident Physician at the German Hospital, Philadelphia. Fifth edition, thoroughly revised. By KARL M. VOGEL, M.D., Assistant Pathologist at the College of Physicians and Surgeons (Columbia University), New York City. 12mo volume of 343 pages, with 90 illustrations, some in colors, and six plates. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Canadian agents: J. A. Cartwright & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$1.00 net.

Within the last few years rapid progress in bacteriology has involved many radical changes in the science, necessitating a thorough revision in the preparation of this edition. It is with pleasure we note the inclusion of all the recent advances in the subjects of Immunity, Tuberculosis, Yellow Fever, Dysentery, Bubonic Plague, and other infectious diseases, making the work reflect as faithfully as possible the present status of bacteriology. We can confidently say that this book in the present fifth edition will be found of inestimable service to the student.

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*A Text-book of Human Physiology.* By ALBERT P. BRUBAKER, A.M., M.D., Professor of Physiology and Hygiene in the Jefferson Medical College; Professor of Physiology in the Pennsylvania College of Dental Surgery; Lecturer on Physiology and Hygiene in the Drexel Institute of Art, Science and Industry. With colored plates and 354 illustrations. Philadelphia: P. Blakiston's Son & Co.

A close and careful examination of this volume of 600 pages shows that the more important facts in physiology have received careful selection and preparation. These facts have been selected not only to elucidate the normal function of the tissues and organs of the body, but as well to bring out the abnormal manifestations as they present themselves in clinical work at the hospital and afterwards in practice. We consider the book has a place in medical literature, and will prove a practical hand book in acquiring a thorough working knowledge of this subject. The typography is of the very best; the cuts are clear and distinct. It appears to have been gotten up to serve a clinical, rather than a scientific or laboratory purpose, and the idea is most happy.

*The Surgical Treatment of Bright's Disease.* By GEORGE M. EDEBOHLS, A.M., M.D., LL.D., Professor of the Diseases of Women in the New York Post-Graduate Medical School and Hospital; Consulting Surgeon to St. Francis' Hospital, New York; Consulting Gynecologist to St. John's Riverside Hospital, Yonkers, N.Y., and to the Nyack Hospital, Nyack, N.Y.; Fellow of the New York Academy of Medicine, and of the American Gynecological Society; Honorary Fellow of the Surgical Society of Bucharest; Permanent Member of the Medical Society of the State of New York. New York: Frank F. Lisiecki, publisher, 9 to 15 Murray Street.

No doubt many who are taking an especial interest in the subject of the surgical treatment of chronic nephritis, will be glad to have at hand full information as embodied in the volume which has been issued by that surgeon, who has taken a foremost place in establishing the success of this treatment. Although the author himself does not believe the time to be ripe for systematic presentation of the subject, it is nevertheless gratifying that he has seen fit to put the entire matter in a get-at-able form. For this reason, no doubt, there will be many glad of the opportunity of a further study of the subject, using Dr. Edebohls' book as a ready reference.

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*Essentials of Nervous Diseases and Insanity: Their Symptoms and Treatment.* By JOHN C. SHAW, M.D., late Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital Medical School. Fourth edition, thoroughly revised. By SMITH ELY JELLIFFE, Ph.G., M.D., Clinical Assistant, Columbia University, Department of Neurology; Visiting Neurologist, City Hospital, New York. 12mo volume of 196 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$1.00 net.

Of the progress made in every branch of medicine during the last few years, none has been more prominent than that considering diseases of the nervous system and of the mind. Dr. Smith Ely Jelliffe, therefore, in making the revision for this new fourth edition, has found it necessary to recast the work entirely, bringing the order of arrangement in accord with the present knowl-

ledge of these important subjects. Quite a commendable change in arrangement is the grouping of subjects in such a way as to bring out the natural relations of affiliated nervous disorders. This will be found of great service to the student. In the section on disorders of the mind, the general views of such leading psychologists as Ziehen, Weygandt, Käpelin, Berkeley, and Peterson have been carefully weighed. This new fourth edition is well worthy our recommendation, and we give it most heartily.

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*A Text-book of Clinical Diagnosis.* By Laboratory Methods. For the use of Students, Practitioners and Laboratory Workers. By L. NAPOLEON BOSTON, A.M., M.D., Associate in Medicine and Director of the Clinical Laboratories of the Medico-Chirurgical College, Philadelphia; formerly Baeteriologist at the Philadelphia Hospital and at the Ayer Clinical Laboratory of the Pennsylvania Hospital. Octavo volume of 547 pages, with 320 illustrations, many of them in colors. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$4.00 net; sheep or half morocco, \$5.00 net.

Dr. Boston here presents a practical manual of those clinical laboratory methods which furnish a guide to correct diagnosis, giving only such methods, however, that can be carried out by the busy practitioner in his office as well as by the student in the laboratory. He has given special attention to outlining in progressive steps the various procedures in clinical technic, such steps being illustrated whenever possible. All the more recent methods for the examination and staining of blood are described and illustrated by original drawings, and the subject of serum-diagnosis is very carefully considered. The newer methods for the estimation of sugar, Bence-Jones' albumin, uric acid, and purin have received thoughtful consideration. The subjects of Animal Parasites, Diseases of the Skin, Transudates and Exudates, and Secretions of the Eye and Ear have received an unusual amount of space. Attention has also been paid to Endoscopy and Cyto-diagnosis. Indeed the book contains much useful material throughout, and being the latest work on Clinical Diagnosis, includes the most recent advances along that line.

*A Reference Hand-book of the Medical Sciences*, embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By various writers. A new edition, completely revised and rewritten. Edited by ALBERT H. BUCK, M.D., New York City. Volume VIII. Illustrated by chromolithographs and 435 half-tone and wood engravings. New York: William Wood & Company.

Volume VIII. completes the set of the new edition of the Reference Hand-book, which may well be called a monumental production in medical and scientific literature. This volume opens with umbelliferæ and closes with yellow fever. In addition there is an elaborate and carefully prepared index. Canada is represented in this volume by four well-known men: Francis J. Shepherd, Montreal; H. Beaumont Small, Ottawa, and W. F. Hamilton and A. G. Nicholls, Montreal. The Reference Hand-book is probably the most extensive medical production undertaken on this continent. It is certainly a work which ought to be in the library of every progressive physician. The editor and publishers alike are to be congratulated upon bringing it to a successful completion.

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*Essentials of Chemistry, Organic and Inorganic*. Containing also questions on Medical Physics, Chemical Philosophy, Medical Processes, Toxicology, etc. By LAWRENCE WOLFF, M.D., formerly Demonstrator of Chemistry at the Jefferson Medical College, Philadelphia. Sixth edition, thoroughly revised. By A. FERREE WITMER, Ph.G., formerly Assistant Demonstrator in Physiology at the University of Pennsylvania. 12mo volume of 225 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto, 1904. Cloth, \$1.00 net.

We need but mention the fact that this little work has reached its sixth edition to prove beyond question its practical usefulness. The recent important discoveries in physics and inorganic chemistry have rendered it necessary, in Dr. Witmer's revision, to make extensive additions almost to every part of the work. The subject of organic chemistry, especially organotherapy and the substituted ammonias, has also been carefully revised and much new matter added. We find the book unusually excellent.

*Diseases of the Nose, Throat and Ear, and Their Accessory Cavities.* By SETH SCOTT BISHOP, M.D., D.C.L., LL.D., author of "The Ear and Its Diseases;" Honorary President of the Faculty and Professor of Diseases of the Nose, Throat and Ear in the Illinois Medical College; Professor in the Chicago Post-Graduate Medical School and Hospital; Surgeon to the Post-Graduate Hospital and to the Illinois Hospital; Consulting Surgeon to the Mary Thompson Hospital, to the Illinois Masonic Orphans' Home, and to the Silver Cross Hospital of Joliet, etc. Third edition. Thoroughly revised, rearranged and enlarged. Illustrated with 94 colored lithographs and 230 additional illustrations. 564 pages, royal octavo. Price, extra cloth, \$4.00 net; sheep or half-russia, \$5.00 net. Philadelphia: F. A. Davis Company, publishers, 1914-1916 Cherry Street.

Ever increasing literature, the introduction of new remedies, methods of treatment, improved instruments and apparatus, have necessitated this third edition of a very practical and reliable book on the Diseases of the Nose, Throat and Ear. Apparently no effort has been spared to make this edition representative of the most advanced work up to the time of publication. The larger part of this volume is devoted to nose and throat; diseases of the ear are well treated of in Part IV. The production from the publishers' standpoint is all that could be desired.

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*Essentials of Materia Medica and Prescription Writing.* By HENRY MORRIS, M.D., College of Physicians, Philadelphia. Sixth edition, thorough revised. By W. A. BASTEDO, Ph.G., M.D., Tutor of Materia Medica and Pharmacology at the Columbia University (College of Physicians and Surgeons), New York City. 12mo volume of 295 pages. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. Cloth, \$1.00 net.

Dr. Bastedo, in making the revision of Dr. Morris' "Essentials of Materia Medica," has furnished the student with a work complete and up to date in every particular. Much of the text has been in great part rewritten. There have been introduced articles on adrenalin, stypticin, and on the iodine and silver synthetics. The present sixth edition is all that could be desired.

*The Woman's Home Library—Beauty Through Hygiene.*  
Common-sense Ways to Health for Girls. By EMMA E.  
WALKER, M.D., Member of the New York Academy of  
Medicine, etc. Illustrated. New York: A. S. Barnes & Co.

As the editor of the *Woman's Home Library* says: "This volume has been written with the direct purpose and deliberate intention to help American women to a better understanding of their physical life and endowments." It would scarcely seem necessary then to go beyond this in the scope of work: suffice it to say that although the subjects written of are necessarily considered minor matters in the domain of medicine, they are at the same time important and ought to command better attention from the medical faculty. The author has been able to present her subject in a pleasant, readable style. The book itself is neat and handy.

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*The Physician's Pocket Account Book*, by DR. J. J. TAYLOR, is a neat, compact, easily kept and strictly legal book, carried in the pocket, always with you, showing each person's account at a glance. All entries are made but once, on the day when the services are rendered, in plain, legal language, and require no posting or further attention. Published by the author, 4105 Walnut Street, Philadelphia.

By always being able to show all inquirers the exact state of their accounts wherever you may meet them, showing date and nature of each transaction, you will save more than enough in one year to buy account books for a hundred years. Being simple and complete, it will save you much valuable time in keeping your accounts and much needless worry as to their correctness.

The book contains obstetric, vaccination and death records and cash accounts. The book is  $4\frac{1}{4} \times 6\frac{3}{4}$  inches, containing over 224 pages. Price, bound in leather, \$1.00; also bound in manilla boards with separate leather case; price of case and two manilla books, \$2.00; subsequent manilla books to use in the case, 60 cents each, two for \$1.00, three for \$1.40; also large size for desk or office use, \$4.00. Address Dr. J. J. Taylor, author and publisher, 4105 Walnut Street, Philadelphia, Pa.

*Handy-book of the Anatomy and Diseases of the Eye and Ear.*  
For Students and Practitioners. By D. B. ST. JOHN ROOSA, M.D., LL.D., Professor of Diseases of the Eye and Ear in the New York Post-Graduate Medical School; Formerly President of the New York Academy of Medicine, etc., and A. EDWARD DAVIS, A.M., M.D., Professor of Diseases of the Eye in the New York Post-Graduate Medical School; Fellow of the New York Academy of Medicine. 300 pages, square, 12mo. Price, extra cloth, \$1.00 net. Philadelphia, Pa.: F. A. Davis Company, publishers, 1914-1916 Cherry Street.

An examination of the pages of this concise book shows that it exhibits the present state of ophthalmology and otology, which makes it reliable. It will certainly prove an advantageous volume for graduates, as well as for those doing post-graduate work, an ever-ready, easy means of verifying clinical instruction.

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*Examination of the Urine.* By G. A. DE SANTOS SAXE, M.D., Pathologist to the Columbus Hospital, New York City. 12mo volume of 391 pages, fully illustrated, including 8 colored plates. Philadelphia, New York, London: W. B. Saunders & Company. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto, 1904. Flexible leather, \$1.50 net.

Dr. Saxe has presented a work on examination of the urine unusually complete, absolutely up to date, concise, yet explicit in all its parts; and it will be found to meet fully the requirements of the student and practitioner without burdening him with unnecessary analytic procedures. Special attention has been paid to the interpretation of findings as applied to clinical diagnosis, and the student is told what each chemical element and each microscopic structure means when found in the urine. The character of the urine in various diseases is also described in detail. Descriptions of technic have been made very explicit, and the author has inserted some new methods of working developed in his own experience. Cryoscopy and other means of functional diagnosis have been given their proper places. The text is fully illustrated, including eight colored plates of the various urinary crystals. The work will be useful because it is practical.

*Blakiston's Physician's Visiting List for 1905.*

Bound as of yore, neatly in leather, comes to us yet once again, an ever-welcome book. It is a plain, systematic method of keeping books, just the thing that every physician requires. It has been fifty-four years before the profession. Write for their descriptive catalogue of books, and their descriptive circular of this one in particular, and you will be doing yourself a real good thing.

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*Regional Minor Surgery.* By GEORGE GRAY VAN SCHALCK, Consulting Surgeon to French Hospital, New York. Second edition, enlarged and revised; 228 pages. Bound in cloth, profusely illustrated. Price, \$1.50. International Journal of Surgery Co., New York.

The second edition of this work has appeared in an unusually short time, indicating its acceptability to the profession. In this handy little work technical subjects have been omitted, and only such practical information on minor surgical conditions taken up as will be of the greatest service to the general practitioner in his daily practice.

# Dominion Medical Monthly

And Ontario Medical Journal

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No. 5.

## MR. CAWTHRA MULOCK'S GIFT TO TORONTO GENERAL HOSPITAL.

The thanks of the medical profession of Toronto are due Mr. Cawthra-Mulock for his splendid donation of \$100,000 towards the purposes of a modern, up-to-date, and well-equipped outdoor department for the Toronto General Hospital. It is fitting also that he should stipulate that every facility should be afforded for clinical teaching. Here is a department which is like in practice to the office practice of the physician, but which is not taken so seriously by the student as it should be.

In these out-door clinics he can learn a very great deal in diagnosis and treatment of minor diseases and conditions which he cannot get by bedside instruction, all of which have their place in practice just as truly as the major diseases. In order, therefore, to secure perfection in training and teaching in these departments, where the student very often spends hours at a time, it is necessary that the surroundings be comfortable and sanitary, supplied with laboratories, examining rooms, lavatories, etc. It is necessary also, when these new out-door departments be located, in view of the very large sphere they will be required to fill, in regard to clinical instruction, that they be situated both as con-

cerns the convenience of the student body and the convenience of the patients who will attend for treatment. The authorities will, no doubt, consider this with all due care, for they can rest assured that if it be located in the proper quarter, much and very great good will result in these two directions. One thing is sure, it cannot be completed too quickly.

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### THE PERIPATETIC OPTICIAN.

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X The care and treatment of diseases of the eye require such special practical knowledge that general practitioners in towns and cities generally refer all or most of these cases to those members of the profession who confine their practices to this branch of medicine and surgery. This is, we believe, done in a strictly conscientious spirit, in the belief that the eye is too important an organ to be treated by any but who has a good scientific grasp of the subject of ophthalmology. It is certainly within the reach of every medical man to possess a full scientific knowledge of this organ, and it is certainly just as much beyond the reach of every medical man to obtain a practical knowledge of the subject, because eye cases form such a very small proportion of general practice. When a medical man, then, who possesses the knowledge of the anatomy and physiology of the eye, who has the knowledge to determine how diseases of other organs may affect this one, realizes that it would be better to hand these cases over to one having a special skill in this direction, it certainly must appeal to the common sense of lay people, that there is something very much at fault, when druggists, jewellers and even veterinarians undertake the work of the fitting of glasses, and not only that, but undertake to make persons the subjects of eye defects or diseases believe that they know all about the eyes, more than the average doctor, and just as much as the eye specialist. But this is not the worst. Large firms fit out and establish in trade the peripatetic vendors of glasses and spectacles, who tramp around the country with their packs on their backs, purporting to be "Doctors of Refraction." They invariably carry an eye salve, of wondrous power, which acts with magical effect, for better or for worse.

Last year the writer was rather chagrined when in the office of a "horse doctor" of a thriving western Ontario town, at

seeing a number of well-dressed ladies waiting their turn to get fitted or to get advice on their glasses. The same town had six or eight capable physicians, some of whom were probably making a bare livelihood, but the veterinarian doctor of refraction was reputed rich and daily getting richer. It seems to us that the only way to get rid of this plague of refracting doctors and peripatetic spectacle pedlars, is for every medical man to consider that a set of testing glasses and an ophthalmoscope are equally essential in his armamentarium as stethoscopes, thermometers, etc. And, indeed, as sanitary scientists and medical publicists, we owe it to the community to protect them from injury to sight just as much as from the infection of smallpox, diphtheria or scarlet fever. The hernia specialist and the refracting optician are the two great parasites of the medical profession. They live and thrive because we fail to brush them off.

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### UNIVERSITY HOSPITAL.

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It should be a matter of great gratification to the people of this city and province, and perhaps more particularly to the medical portion of the same, to note with what general appreciation the idea of a new and larger General Hospital has been received. Perhaps it were more conservative to say there has been little opposition to the proposed scheme. A very able article in *Toronto Saturday Night*, on the 5th inst., is specially worthy of note in this regard. In this splendid article, the writer (evidently himself in fullest accord with the proposition) says in part: "Dr. Sheard, the capable Medical Health Officer of this city, who is probably more of a cynic than a zealot, and has a greater tendency toward being a humorist than a sectarian, may have been misunderstood by the interviewer, but if not, he has thrown a wet and frosty blanket on the whole scheme." He then proceeds to give in full the Doctor's remarks as published recently in one of our daily papers, the closing paragraph of which is as follows:

"If we are to have a General Hospital in connection with the University, and if we are to have the clinical advantages desirable, we will have to obtain them in some other way than by the city making a grant of \$100,000, unless the Council is prepared to treat all our hospitals alike. If this can be done, then the

money granted towards the new General Hospital will be money well spent."

If we understand the case aright, the prime *raison d'être* of the proposed new hospital is that it shall be for the express purpose of affording greatly increased clinical facilities to the medical department of the University. It seems to us, such being the case, that only such institutions as admit students to their wards should have any reasonable claim for consideration in the matter of a civic grant. We, therefore, feel some difficulty in grasping the logic of Dr. Sheard's statement that "If we give a grant to the new General Hospital, the other hospitals will desire similar generous treatment."

The people of this province, more than the citizens of Toronto, perhaps, fail to realize fully the prime importance of our great University. Year by year it is gaining in equipment and efficiency in the various departments. New departments are being created, the latest, thanks to the splendid generosity of Mrs. Massey Treble, being that of Household Science. We have recently seen a magnificent advance in the medical department, in the fine laboratories opened last year. We think the people should be made to realize more fully the importance of better facilities for clinical teaching in connection with the medical department of the Provincial University; and it would seem only fair that both the people of the Province and the citizens of Toronto should contribute liberally toward an enterprise which concerns so vitally the future well-being of the people. Surely it is time to eliminate all Chauvinistic ideas, and unite in the furtherance of this grand work.

*Saturday Night's* idea of a General Hospital, in which all the hospitals of the city should be parts of one great whole, is at least a grand idea, although perhaps a very difficult one to carry out. It would seem feasible, however, to have all the city hospitals under the guidance, if not the control, of one General Hospital Board, elected by the people or appointed by the Council. For the present, it seems to us the institutions which have given the greatest facilities toward clinical teaching should have the first consideration, and as the Toronto General Hospital is by far the oldest and largest, so, too, perhaps, it should get the very first attention. We are informed by Dr. Charles O'Reilly, Medical Superintendent of the General Hospital, that in 1876 (the year he assumed the superintendency), the hospital admitted about 800 patients. From that time on, the number has increased from year to year, till last year nearly 4,000 patients were admitted to the hospital, to say nothing of the

great number of out-door cases. During that time, nearly 3,700 births have occurred in the hospital, while the statistics show a remarkably low mortality.

Thanks to the great generosity of Mr. Cawthra Mulock, we are to have a thoroughly up-to-date out-door department. (Let us hope it will be located down in the centre of the city, where the class of patients who require such accommodation can readily get it.) There might be a fusion of the present Emergency Hospital with the proposed out-door department. The clinical hospital proposed might be located with the new out-door department, thus giving greater convenience for the students. The present athletic grounds, north of the University buildings, have also been spoken of as a desirable site for the clinical hospital, but it seems to us a location farther south, "down in the ward," would be a more practical location.

We are sure the medical fraternity of the province unite in wishing Godspeed to such a worthy project as would seem to be embodied in the idea of better clinical training for the coming generations of practitioners, and thereby the betterment of the people as a whole.

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### PNEUMONIA.

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It is a true statement that, while the deaths from tuberculosis are diminishing the world over, those from pneumonia are on the increase. Their rapid increase in the last few years has necessitated special commissions of inquiry in certain large cities. In nearly all of the large cities of the United States and in Canada, and in the cities of European countries, there has been, in recent years, within the last decade, a marked increase in deaths from this cause. For ten years the specific micro-organism of this disease has been known, but no method of treatment has been found which could be called specific. Numerous have been the articles written on pneumonia, and equally numerous have been the series of cases reported treated successfully with this or that drug, quinine, ergot, strychnine, creasote, digitalis, salicylates, etc., but there has not been evolved any single line of treatment applicable in all cases. Indeed, one eminent authority states there is no treatment for pneumonia, that the patient will get along equally as well without medicines as with them. It is about ten years, too, since this doctrine was propounded. It may have been followed out too religiously and zealously. At any rate,

the propounding of this "let well enough alone" treatment sees an ever yearly increase in the death rate. It looks as though health officers will have to look after pneumonia same as other infectious diseases.

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## Editorial Notes

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### **Wm. R. Warner & Company at St. Louis Exposition.**

Wm. R. Warner & Company, Philadelphia, have been successful in being granted the highest award, namely the Grand Prize, for pharmaceutical preparations, over all competition, at the Louisiana Purchase Exposition at St. Louis. The success and distinction to which they have attained in this direction will be sure to please their many friends throughout Canada. Members of the medical profession are always glad to hear that a high standard is being maintained in the pharmaceutical preparations which they constantly employ.

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### **Awards to the Wellcome Chemical Research Laboratories, London.**

The Committee on Awards of the Louisiana Purchase Exposition, St. Louis, have conferred upon the Wellcome Chemical Research Laboratories the distinction of a grand prize and three gold medals, in recognition of the importance and educational value of the chemical and pharmacognostical researches conducted in these laboratories under the direction of Dr. Frederick B. Power.

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## NEWS ITEMS

MONTRÉAL had 528 deaths from pneumonia in 1903.

THE total birth rate for Montreal during 1903 was 36.08 per 1,000 of the population.

THE total deaths in Ontario during the quarter ending September 30th was 5,872.

DR. W. A. YOUNG, Toronto, has returned from a trip to St. Louis and Chicago.

MONTREAL will adopt a by-lay prohibiting spitting on the streets and in public buildings and places.

OXFORD and Waterloo Counties, Ontario, proposed erecting a joint sanitarium for the treatment of cases of tuberculosis.

WINNIPEG GENERAL HOSPITAL has received a donation of \$500 from Mr. F. W. Thompson, of the Ogilvie Flour Mills Company.

THE proposition submitted to the Ontario Board of Health to have a law enacted to have bread delivered in paper bags is a good one.

THE lumbermen going into New Ontario lumber camps are all being vaccinated. Ontario has been practically free of small-pox during the past two months.

THERE were 412 deaths in the Province of Ontario from tuberculosis during the quarter ending September 30th, which is said to be 20 per cent. over the corresponding period of last year.

DR. FRED. HARVEY succeeds Dr. Tait McKenzie as director of the McGill gymnasium, the latter having gone to Philadelphia to assume his duties as director of the Physical Department of the University of Pennsylvania.

CONGRATULATIONS are due the Hon. Dr. Sullivan, Professor of Surgery in Queen's University Medical Faculty, on the completion of his fiftieth year as a disciple of Æsculapius. Dr. Sullivan began the study of medicine at Queen's in 1854.

REMOVING THE INSANE FROM THE JAILS.—It is gratifying to learn that the Provincial Secretary's Department is removing from jails all insane persons confined therein and having them properly housed in the various asylums of the province.

THE NEW CONSUMPTION HOSPITAL NEAR WESTON.—The Toronto Free Consumption Hospital, situated near Weston, Ont., admitted its first patient on September 2nd, and there are already forty patients in residence, advanced as well as incipient cases being received. The physician in charge is Dr. Allan H. Adams.

THE patients treated in the Toronto General Hospital during the month of October numbered 480, 220 being admitted during the month. The births in the Burnside numbered seven, and the total deaths in the hospital were twenty-three, ten of whom died within a short time of their admission. Over nine hundred

externe patients received advice and treatment, while in the Emergency branch there were two hundred accident cases.

**ANNOUNCEMENT.**—In announcing his retirement as Medical Superintendent of the Alma Springs Sanitarium, Alma, Mich., and return to his former home, Chicago, Dr. George F. Butler desires to convey his assurance of personal interest in his former clients. His return to Chicago does not mean withdrawal from the practice of medicine. On the contrary, Dr. Butler will limit his business to medical work exclusively, and has arranged excellent facilities for the care and proper treatment of nervous and chronic invalids in the city and from out of town. City office, 1210 Columbus Memorial Building; residence, 5711 Washington Avenue, Chicago.

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## Correspondence

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### THE VANCOUVER MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

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*To the Editor of DOMINION MEDICAL MONTHLY:*

DEAR SIR,—With your permission I will make a few observations on your strictures on the profession of Toronto in the editorial in the current number of your journal on the foregoing subject.

That so few were able to attend the meeting at Vancouver is unfortunate for the Toronto profession, as well as for the Association. One cause, at least, of the small attendance is not far to seek. At the time of the visit of the President last year he was informed that several of the Toronto physicians would be unable to go if the meeting was held later than the middle of August, as they had engagements at home for September 1st. Notwithstanding that, the meeting was placed in the last week of August, and apparently the time was practically fixed before the Toronto members were consulted. In view of such ignoring of their convenience, as well as of themselves, is it a matter of surprise, or for censure, that they in their turn should ignore this meeting of the Association? If the records of the meetings of the Association for many years back are examined, it will, I think, be found that Toronto has been second to none either in the matter of attendance or of work done. It is questionable

then whether it is in the interests of the Association that one of its officers should write such an article, or permit it to appear in his private journal. However, notwithstanding the lateness of the meeting, some would have managed to attend had earlier transportation been secured so as to enable them to take the long journey leisurely, and to stop over at many places on the way to enjoy the prairie and mountain scenery. This would also probably have prevented the crowding of coaches, as well as obviated the necessity of standing in line for an hour or two awaiting an opportunity to secure a meal in the dining-car.

I regret that I have to plead guilty to the charge of having my name announced for a paper which I "did not appear to read." This is, I think, my first offence. However, I withdrew the paper as soon as it was evident I would be unable to attend, so that it should not, and, I suppose, did not, appear on the official programme. Everyone will agree that for the success, if not the existence, of the Association it is essential to insure an "intact programme"; to do so it will probably be necessary to have the papers in the secretary's hands before the meeting in time for the official programme, or, better still, so rouse the enthusiasm of the members that all will be anxious to read papers.

As to the meeting next year in Halifax, all will second your wish, that Toronto may be largely represented, both in attendance and work.

Yours sincerely,

(Sgd.) ALEX. MCPHEDRAN.

October 20th, 1904.

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## Special Selection

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### IRON AS A REMEDY.

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Time out of mind iron has been leaned upon as one of the special standbys in medicine, particularly as a builder and reconstructor. But unless iron be given in proper form, one might as well give absorbent cotton, or chips or wet stones. When we desire to produce any increase in the number of red blood corpuscles, and to make them redder and richer with hemoglobin, we need to be sure of the form of iron that we are giving. The

evidence has been accumulating these many years that manganese, in itself an admirable remedy, combined with iron emphasizes the potency of both.

Dr. Gude, the great German chemist, contributed very definitely to the good of the profession when he presented the product of long years of experimentation, and clinical experience, the therapeutic product known as Pepto-Mangan (Gude).

Added to the many hundreds of clinical contributions, Dr. J. W. Frieser, of Vienna, Austria, recently reports most favorably and very forcibly, observing as follows:

"Pepto-Mangan contains iron and manganese combined with peptone in the proper proportions, and in a readily digestible and absorbable form, so that the preparation can be completely utilized by the organism. As is well known, the peptones represent artificial predigested products, which when taken into the organism make no special demands upon the digestive functions, which in anemic and chlorotic persons are usually weakened and impaired in action. This fact is the more important, since in these cases, the digestive process and the secretion of gastric juice is usually reduced, in consequence of which the nutrition is quite impaired, while frequently there is a condition of hyperacidity of the gastric juice. It has been most gratifying to me to observe that during the use of Pepto-Mangan (Gude), which experience has taught me is particularly adapted in these maladies, it does not interfere with, or exert any disturbing effect upon the digestion. On the contrary, under its administration, the appetite and the digestion are stimulated in a very satisfactory manner.

"As a rule, during treatment with Pepto-Mangan the improvement in the constitution of the blood, as shown by physical examination, was accompanied by a beneficial effect upon the general condition and strength. The appearance and appetite of the patients improved visibly; the digestion and nutrition progressed favorably, and the patient felt better, happier, and more vigorous. Disturbances of the gastro-intestinal tract, such as pressure or pain over the stomach, nausea, a disagreeable feeling of dulness, a diminution of appetite, constipation, congestions, etc., which are so frequent during the administration of other iron preparations, especially those of inorganic character, were scarcely ever observed during the use of Pepto-Mangan (Gude). On the contrary, in those cases in which there is a tendency to constipation, and a marked atony of the gastric functions my experience has led me to regard this remedy as especially useful and effective."—*Medical Mirror.*

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## Original Articles

### ADDRESS IN MEDICINE. CANADIAN MEDICAL ASSOCIATION.\*

BY R. E. MCKECHNIE, M.D.

*Mr. Chairman and Gentlemen,—*In asking a member of the profession residing in the far West to deliver the address in medicine, I feel that a compliment has been paid, not so much to myself, as to the West. To demand that we, living so far away from the centres of learning, from the great teaching institutions of the East, should nevertheless be expected to keep ourselves abreast of the times and in touch with the latest discoveries, is surely expecting a great deal; and then to expect that one, living under such barren influences, should be able to give you an address equal to this occasion, containing some food for thought and pointing out the pathway of duty and practice, is to look still further for a miraculous manifestation. But the germ of the West is ever equal to all occasions. It has grown accustomed to the knowledge that the best wheat in the world grows in our North-West; that our forests can supply the hugest sticks of timber known to commerce; that our fisheries can supply the world with illimitable quantities of salmon, halibut and other

\*Read at meeting of Canadian Medical Association, Vancouver, B.C., August, 1904.

delicacies; always the best, the hugest and the illimitable, ever the superlative. So it is not strange that a strong egotism has developed out here, sufficient even to accept this task, and hoping, but with misgivings, that its self-sufficiency may not suffer in the attempt. Personally, I feel that a great honor has been conferred on me, and I most sincerely thank the Association for its kindness, and trust that its confidence may not have been misplaced.

As to-day we seek to adapt treatment according to the cause of disease, so, looking back to the remotest ages, we find the human instinct groping along the same pathway. But in the early ages of the race science was unknown, and miracle was seen in every unexplainable phenomenon. Hence disease was attributable to the wrath of a good being or the malice of an evil one, and treated accordingly. Among the ruder tribes the Medicine-man has ever held sway; but even in higher civilization we find that in Egypt the priests of Osiris and Isis claimed powers over disease; in Assyria, the priests of Gibil; in Greece, the priests of Esculapius; in Judea, the priests of Jehovah. While these have ceased to exist with the decay of their respective religious systems, the ruder primitive tribes have persisted. They are found among the aboriginal tribes of Africa to-day, as also on this side of the Atlantic. Parkman, in discussing the customs of the Hurons, says: "A great knowledge of simples for the cure of disease is popularly ascribed to the Indian. Here, however, as elsewhere, his knowledge is in fact scanty. He rarely reasons from cause to effect, or from effect to cause. Disease, in his belief, is the result of sorcery, the agency of spirits or supernatural influences, undefined and indelible. The Indian doctor was a conjurer, and his remedies were to the last degree preposterous, ridiculous or revolting."

Among the Coast Indians in British Columbia the practice is still kept up, and it may interest you to hear me relate what I saw not forty miles from here only three years ago. In the Indian villages are to be found huge barnlike structures called rancheries, each consisting of one immense room and capable of accommodating twenty or thirty families. Living close to nature, the floor, of course, is mother earth. Rough stalls, arranged along the walls, separated by screens of rush matting and open towards the centre, form the none too private retreats of the individual families. Each lights its own fire on the earthen floor opposite, whereon their rude cooking is done. The smoke escapes through the shingles, as there is no chimney, and in the absence

of windows the light comes in through the cracks in the wooden walls. I went down one evening to such a place to see a sick Indian woman. It was dusk, and the waves of the sea were lapping the beach close at hand, while dusky children flitted by in the twilight, engrossed in some pastime. On entering the only door in the rancherie, I found it in utter darkness, excepting for a small fire burning at the entrance end of the building. Here was presented a study in light and shade, to have suited a Rembrandt. Around the fire was arranged a circle of Indian women (it is always the women who are closest to the mysteries of nature), while at one side was the patient, too weak to sit up, but supported by a couple of sympathizers. Facing her was the Indian Medicine-man, trying to cure her disorder by directing his energies to overcome the supposed curse of her disease. My diagnosis was tubercular pleurisy with effusion, but my Indian confrere had diagnosed possession by an evil spirit, and as he was in charge of the case, I could only look on. Each woman, with a stick in either hand, was beating on a piece of wood before her, making as much noise as possible, and adding blood-curdling explosives to the incantations of the Medicine-man, in a vain endeavor to drive out, to scare out, the possessing spirit. But unfortunately this kind comes not forth by such rude wooing. And so, from the gray dawn of time, down to what we imagine is the mid-day splendor of to-day, such forms of practice have persisted through all the ages.

But let us not imagine the air clear yet; the fog is only getting thinner. In other times the sun has attempted to shine through. Five hundred years before Christ, Hippocrates broke away from the old truthtellers of healing, the supernatural methods, and laid the foundations of medical science on experience, observation and reasoning. Later his teaching influenced the school of Alexandria, where positive knowledge was developed by the adoption of anatomic studies; and centuries later, under Moslem patronage, the medical sciences reached their highest development in the Middle Ages. But Europe was less fortunate under Christian influences. There was a return to the belief in the supernatural origin of disease, and in the practice of supernatural methods to combat it. Regression prevailed over progression. Still believing in demoniacal possession, the various *measures* of exorcism was practised, even combined with such practical methods as the following: "To disgust the demon with the body he was tormenting, the patient was made to swallow or apply to himself unspeakable ordure, with such medicines as the livers

of toads, the blood of frogs and rats, fibres of the hangman's rope, and ointment made from the body of gibbeted criminals." For myself I would prefer the simpler methods of the British Columbia Medicine-man. Cures effected by relics, by pilgrimages and sacred observances obscured the horizon, while even the Divine Right of Kings gave the world the blessings of the Royal touch for King's Evil. All these practices were injurious to the development of medical science, for "why should men seek to build up scientific medicine and surgery when relics, pilgrimages and sacred observances, according to an overwhelming mass of concurrent testimony, had cured hosts of sick folk in all parts of Europe?" But finally the tide turns. The discoveries of Galileo, Kepler and Newton had their reflex on the sister science of medicine, and investigators made bold to pry into the secrets of life and learn her vital processes, to seek the true causes of disease and endeavor to find the cure. Relapses have occurred. As fanatics opposed the introduction of the fanning-mill because it infringed on the divine prerogative, which furnished the wind to winnow the wheat from the chaff, similarly, opposition arose to the introduction of inoculation, vaccination and the use of anesthetics. And as supernatural agencies were invoked to cure diseases supposed to be of supernatural origin, so to-day we have the various sects of faith-healers, magnetic healers and what not.

But, as Carlyle says, "Only what is true will persist. Out of the merciless fire of modern criticism truth, like asbestos, will come forth purified; but vain theories, gaseous, will be dissipated among the waste winds forever."

But where do we stand to-day? Have the fogs all lifted and do we now see clearly? Unfortunately not. Investigators to-day are not numbered by tens but by hundreds, pursuing many diverse threads of thought, and giving to the world their conclusions, fully formed or immature, probable or fantastic, relevant or irrelevant.

The search for the causes of disease still continues as actively as ever, but disappointments are far more numerous than successes. Concerning sarcomata, Stimson, in this month's *Annals of Surgery*, says: "We are absolutely in the dark as to etiology, and no further advanced in prognosis and treatment than were our colleagues a quarter of a century ago."

Dr. Snow, Chief of the London Cancer Research Committee, has come to almost identical conclusions regarding carcinoma. As regards these two classes of diseases, we are, therefore, forced to be content, at present, with increased ability to diagnose them,

and have to thank the surgeon largely for the groundwork of this advance.

In 1882 Koch proved tuberculosis to be due to a specific bacillus, and in 1890 startled the world with the announcement of a cure. We all remember the reaction, the tremendous disappointment, felt not only by the laity, but even more keenly by ourselves, when slowly, unwillingly, we were forced to admit that our expectations were not realized. Early in 1903, Behring delivered a lecture before the Vienna Medical Society, detailing his experiments on animals with his own special serum, and speaking very hopefully as to the future. Perhaps he, who with Roux, discovered in diphtheritic antitoxin the greatest remedial agent of recent times, will unravel the puzzle.

More recently, Marmorek, of Paris, has staked his great reputation by giving to the world the results of his labors in a new serum, and we can only trust that time will prove that it possesses some definite value. Later still, that our professionally agnostic brethren may not starve for want of food, an Italian professor has enunciated that Koch's tubercle bacillus is not the cause of phthisis, but rather an uncouth octapoid micro-organism of his own finding. Well may the general practitioner raise his hands in despair and wonder what he can believe.

But experience has shown that in tuberculosis, as in other things, prevention is better and surer than cure. Statistics are piling up year by year, adding proof where now none is needed, that, recognizing tuberculosis as an infectious disease and treating it accordingly, a definite gain can be recorded. Education of the public has already advanced so far that more positive steps should be enforced. Compulsory notification, as in other infectious diseases, proper disposal of infected excreta, disinfection of infected dwellings, etc., should be rigidly carried out, and the same positive results would be attained throughout the country at large as already obtain in the few places far advanced enough to follow this self-evident line of action. A resolution should be passed by the present meeting, urging the various Provincial Governments to introduce the necessary legislation, and I venture to affirm that, coming from such an influential a body of scientists, the suggestion would be adopted. And, if adopted, as I have already said, the educated sentiment of the public would not obstruct, but rather would uphold the action of the authorities. Perhaps this body has already taken such action, but until the various authorities have adopted the suggestions, I consider it the duty of this Association to yearly reiterate the advice. Then

finally will begin an era of diminution, until, as some of our more optimistic brethren affirm, fifty years will see the extinction of the Great White Plague.

Councilman's pronouncement as to the causative agent of variola still remains unchallenged: while more recently Mallory, of Boston, has described a protozoan which he has named *cyclaster scarlatinalis*, and which he believes has a causal relation to scarlet fever. In the winter of 1902-3, Mosher, of the Kinderspital in Vienna, announced the discovery of an anti-scarlatinal serum prepared from a coccus constantly found in the throats of subjects of that disease. His statistics, covering several hundreds of cases, both mild and severe, were, as such statistics usually are, certainly favorable; but he failed to prove his coccus as the cause of the disease, and the consensus of opinion inclines to believe that the favorable results were due to the combatting of the influences of a mixed infection. The same favorable results can also be obtained by the use of antistreptococcal serum, which reagent, in other forms of infection, has not the wide use among the profession that its virtues demand.

To turn to another field, where surgery and medicine meet, we find that some definite progress has been made. Numerous operations on the stomach have shown that ulceration is more common there than formerly suspected. The physician of to-day must not expect to find all the classical symptoms, for we can have ulceration without pain as we also can have it without hemorrhage. Brilliant results have been obtained in most inveterate cases, by operative methods, results such as medicine has not afforded. Under these circumstances we have the added responsibility of advising some of our patients to submit to the risks of an operation, a responsibility which will often tax our courage to the utmost, but which we, as true men, should not shirk when the occasion arises.

In diseases of the biliary tract, surgery has also disclosed many new features. The post-operative biliary fistula, in cases of obstruction of the common duct, affords a positive means of correctly estimating the quantity and qualities of the bile. The use of cholagogues has an established place in our practice, but now our faith is rudely shaken. Although the term cholagogue has been in use for more than two thousand years, and is apparently as firmly seated as the everlasting hills, recent investigations have caused it to tremble, and it may eventually disappear as did many a mountain in some prehistoric cataclysm. Mayo Robson, in estimating the effects of certain so-called cholagogues,

found that the old reliable calomel caused a diminution instead of an increase in the flow of bile. Enonymim gave the same result, while rhubarb and pod picrotin, turpentine and benzalate of soda gave negative results. His conclusion is: "The supposed cholagogues investigated seem to rather diminish than increase the amount of bile excreted." Perhaps the most of us feel like saying as the fox to the grapes, "We did not think they were much good, anyway."

As regards cholelithiasis we have also learned a great deal, and have had to revise our views as to etiology, and must consider the typhoid bacillus and the bacillus coli the primal cause for the majority of the cases. The French school go so far as to affirm that, without infection at some stage of the disease, we will not have cholelithiasis. Legars says: "The infectious origin of biliary lithiasis is proved, for the following reasons: If we have shown that gall-stones do not depend on general and obscure humoral conditions, but on a local infectious process, the disorder becomes for the most part also a local matter, and as such accessible to direct local means. If the calculi are once formed, they increase and multiply, and we can still be sure that they are due to a single attack of lithogenous infection. At a given moment, microbian invasion of the gall-bladder took place, and these microbian invasions, of intestinal origin, depend on various causes and may occur in the course of different acute disorders; at any rate the calculous disorder comes from this primordial lithogenous cholecystitis. Once more, it is a complaint of the gall-bladder and ducts, not of the bile, and lithogenous cholecystitis is comparable to many other local infections, such as appendicitis, for instance. By removing the calculi, or the gall-bladder, recovery may be complete and final. Finally, we find infection not only at the origin of lithiasis, but also at all stages of the disorder; it is the leading factor of the various complications as well as of the prognosis of the complaint."

Deaver says: "It can be emphatically stated that gall-stones are always the result of precipitated salts and tissue debris, following in the wake of bacterial infection, mild or severe in degree. Furthermore, the complications of chronic gall-stone disease, adhesions, ulceration, fistulæ, liver and pancreatic disease, are also due to infection." He also says: "The treatment of chronic gall-stone disease, its complications and sequelæ, can only be surgical. Gall-stones are formed through the aid of infection, and therefore the disease is local and requires local treatment.

that is, operation, and not solvents or cholagogues to relieve a condition resulting from faulty metabolism."

Therefore, the same application can be made here as was made in reference to gastric ulceration. We should realize the impotence of medicines. Solvents do not dissolve, and the old treatment was merely that of temporizing, with the hope that Dame Nature would aid our misguided efforts by expelling the offending bodies through the natural passages. Such expectancy is often dangerous. Surgery holds out a positive cure in a large proportion of cases, but too many of us fear the responsibility of advising such radical treatment, and our patients suffer from our timidity.

Let us now return to a consideration of the work being done by our great army of investigators. In reviewing their work, not only that of the past year, but of recent years, we see labor multiplied, mountains heaped on mountains in the attempt to scale the heights of the unknown, until, considering the results attained, we might be forgiven for inquiring, "What avails so Titanic a struggle?" The causes of disease are so intricate that they are reached only after ages of scientific labor. Yet a few successes have made us impatient of the coming of complete victory. Some successes have proved to be stars of the first magnitude, others but the smallest flint sparks to illuminate the truth, whilst many so-called discoveries have given no more light than when wax is struck on wax, idle theories, thoughts written on the brain and now, let us hope, rubbed out forever. Looking at the workers as constituting an army, one searches in vain for a controlling spirit, one which will concentrate the tremendous and apparently never-tiring energies of this mass of workers into a well-directed assault on some stronghold of the unknown. Modern investigators are, to quote a phrase of Carlyle's, "like a hapless servant gone masterless, unfit for self-guidance." To give an idea of the varied subjects being studied, let me quote the titles of a few of the papers published during the year in but one publication, *The Journal of Medical Research*: "On the Appearance and Significance of Certain Granules in the Erythrocytes of Man," "The Influence of Certain Bacteria in the Coagulation of the Blood," "The Relation of Specific Gravity and Osmotic Pressure to Hemolysis," "The Bacteriolytic Complement Content of Blood Serum," "The Agglutination of the Pneumococcus with Certain Normal and Immune Sera," "Cat's Blood: Differential Counts of the Leucocytes," "A Study of the Agglutinating Hemolytic and Endothelial Action of Blood Serum in Variola," and so

on. I do not wish to speak slightly of the labors which these titles of so diversified investigations portray, but I do affirm, that if the workers of some one strong school were under one's sole control, their campaign planned against one enemy, and their work properly correlated, more progress would be made in a given time than by the independent, uncorrelated work of all the schools combined.

Such a view is perhaps too Utopian. The world will "gang its ain gait," and our workers will continue to work as before. Truths will gradually be unfolded and science will be developed in the medical field as in the other realms of science. As Marconi did not have to wade through all the drudgery of elaborating the data he needed, but utilized the work of others in perfecting his discovery; as Roentgen needed to win but a single step in advance of others in the race to gain the palm, so, too, can we confidently look forward to the appearance of a master from among our members, one who, building with the bricks made by others, will erect the edifice of truth containing the key which will unlock the secrets of nature and give us command over our most illusive foes. We all feel that that day is near at hand, and when it dawns we will join unselfishly, without a trace of jealousy, in crowning that master with the everlasting laurel.

In conclusion, Mr. Chairman and gentlemen, I thank you for the patience with which you have listened to this address, and wish you every success in your labors in the Section of Medicine.

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It is now just seven years (A. D. Rockwell, in the *Medical Record*) since the Roentgen ray was made known to the world, and in that time its development has gone on uninterruptedly, except for a short time, when the public were up in arms at its dermatological "offences." But it was this very "offence" that gave to the scientific investigators the impetus necessary for the discovery that the rays were rich in curative as well as damaging effects. The outcome of which is that thousands of persons are now perfectly well and strong, who prior to this time had been suffering from chronic disturbances. Who can tell what the future of such an all-powerful agent is to be? Was it not many years after the actual discovery of electricity that the benefits began to be felt? Is not electricity still in its infancy? If such is the case, what are we to think with regard to the development of the Roentgen rays.

## IS THE PRESENT METHOD OF EDUCATING GIRLS CONSISTENT WITH THEIR PHYSIOLOGICAL DEVELOPMENT? AND IS IT FOR THE WELFARE OF THE RACE?\*

BY A. LAPTHORN SMITH, B.A., M.D., M.R.C.S., ENG.

Fellow of the British and American Gynaecological Societies; Honorary Fellow of the Italian Gynaecological Society; Professor of Gynaecology in the University of Vermont; Professor of Clinical Gynaecology in Bishop's University, Montreal; Surgeon-in-Chief of the Samaritan Hospital for Women; Gynaecologist to the Western General Hospital and to the Montreal Dispensary, and Consulting Gynaecologist to the Women's Hospital, Montreal, Canada.

As the highest aim of our profession is to prevent disease by teaching the people the laws of health, the writer felt that it was a duty as well as a pleasure to comply with the request of the American Academy of Medicine to write a paper on this topic. The mere fact that this question was chosen as the subject for a symposium or group of papers, shows that there was in the minds of the members of the committee, all of whom are doctors with a large experience of human ills, a grave doubt whether the present tendency towards pushing the education of girls to the highest possible point is consistent with their physiological development and for the welfare of the race. The task was an agreeable one, for the writer's own professional experience had already forced him to the conclusion that the health of the future mothers of the race was not as good as it should be, and that there were causes for the same which could and should be removed. That there is more sickness among the women of to-day than there was among their mothers and grandmothers, seems to be the general opinion of a great many physicians who give special attention to this branch of medicine. In fact, it is notorious among the laity themselves that there is a great deal more ill-health among women now than there was fifty years ago, and the patients, both male and female, are constantly asking us what is the reason that there are so many sick and complaining women. I say, patients in general, and not female patients alone, are making this inquiry, for young men by the hundreds of thousands, who should be married and at the head of happy homes full of children, and who are remain-

\*Read before the American Academy of Medicine, at Atlantic City, on June 6th, 1904. Published by courtesy of the Bulletin of the Academy of Medicine.

ing single long after the age at which they should be married, and who are doing so at an enormous loss to their moral and physical welfare, give this as their principal excuse, that the average experience of their friends who have married, has been that the educated women of the present generation are physically unfit to be wives and mothers.

The writer recognizes several sources of error which must be allowed for before making sure that this conclusion is correct.

First, the men who, by great care in selecting, or by chance, have secured a healthy wife, say nothing about their happiness, for they take it as a matter of course, as if it were something that should be so, instead of being something remarkable; while the men whose wives begin complaining a few days after their marriage, and continue to complain until death comes to their relief, are almost sure to tell their friends about their misfortune, and in return for the sympathy which they deserve and receive, they advise their bachelor friends to remain single.

The other source of error arises with the specialist for women, who, because all the women who come to him are sick and give a history of never having had a day's health since their marriage, would come to the conclusion, therefore, that all married women are ailing. In other words, that because he never sees or knows any women, professionally, who are not ailing, well women do not exist.

There is another source of error coming from the married state itself which must not be charged to the woman or her education, but to the men, for no matter how perfect a woman's health may be before marriage, she may still prove a failure as a wife and a mother if she acquires gonorrhea, with its pus tubes and pelvic peritonitis.

There is still another source of error, which may or may not be due to the woman's education, namely, the inducing of abortions. These, of course, wreck a woman's health, and make her a failure as a wife and mother, but in the majority of cases it is because she is already a failure in health that she resorts to this crime, for, with few exceptions, it is only sick married women who dread pregnancy and the raising of a happy family.

Now, after making due allowance for these sources of error, the writer still believes that the majority of educated women on this continent reach a marriageable age in such a poor condition of health that it is a real hardship for them to perform the normal natural duties of wifehood and motherhood, and of raising an ordinary-sized family.

We need hardly spend any time in arguing that the cheerful and happy performance of these duties is the manifest destiny of woman, and that any general disinclination to undertake them, or any attempt to shirk them when undertaken, will inevitably throw the whole world's machinery out of gear, and bring disaster upon her and upon the race. Nature indeed has a summary way of punishing either men or women, who from motives of selfishness, or from physical inability, do not marry and raise a family; she simply extinguishes that breed and replaces it on the earth by a race of people less highly educated, but which knows enough to propagate itself.

It is true that an infinitesimal number of people, mostly women, deny that it is the destiny of women to become wives and mothers, and would even lead them in a rebellion against nature, telling them that these duties are degrading, and that they should abandon the profession of homemaking and launch out into political or business life. But the whole common-sense of the world is against them, because it sees that when they do succeed, as they undoubtedly do, their success absolutely fails to bring them the happiness and the satisfaction which the poorest laborer's wife obtains from her houseful of hungry but happy little ones.

The writer admits that every child should receive an elementary education, which should, up to puberty, be the same for boys and girls, provided that it be given in such a manner as to not interfere with their physical development. A large part of every day should be spent in the open air, either at drill or in play, and there should be no homework to keep them up late at night, which is one of the great mistakes in modern methods of bringing up children. Our mothers and grandmothers, when children, were in bed at eight o'clock at the latest, while our children are allowed, on various pretexts, to remain up until ten or eleven. Does it not seem folly to allow, or urge, a child to fill its brain so full of work during the evening that it keeps on working all night, even repeating its lessons during its restless sleep? A great improvement has taken place during the last few years by the introduction of manual training, or Sloyd, for boys, and in a few schools the girls are being taught cooking and domestic science. Of this, however, I will have more to say later.

At the age of puberty, boys and girls should have a different course of education. The menstrual function makes great demands upon a girl's strength, and if her brain is worked up to its

fullest capacity, then the organs of generation must suffer, and the foundation is laid for lifelong female troubles, such as ovarian neuralgia, etc. This is the experience of most of the gynecologists with whom I have spoken on the subject, namely, that the average girl has not enough blood to meet the enormous demands of the brain required by modern education, and at the same time to allow her organs of generation to grow as they should. This seems to the writer to be the explanation of the large number of cases of infantile uterus we meet in grown up women. This infantile uterus either will not conceive, or if it does it will almost surely be torn at the first labor. In my opinion, therefore, every month girls should be excused for a few days, during which they should either rest, if they are in pain, or stay out in the sun or fresh air without anything to call the blood away to the brain. According to present methods of education nothing is allowed to interfere with the process of developing the brain by rigorous attendance at classes and the study of a multiplicity of unnecessary subjects. According to the method the writer and many of his colleagues would advocate, nothing should be allowed to interfere with the girl's physical development, *all the education in the world being of no account whatever compared with the possession of robust health.* It is a pleasure to notice that in many schools on this continent a great deal of attention is being given not only to the teaching of hygiene, but also to the practice of it by allowing the girls to engage in outdoor games, which are of the greatest possible value in developing the muscles. In the writer's opinion there should be a complete change in the subjects taught to girls during the last few years at school. Algebra, euclid, botany, chemistry, mythology, astronomy, Greek and Latin, should be cut out, and the time devoted to dress-making, millinery, cooking and domestic economy, including the care of the baby, the making of the home, and even the care of the husband. In fact, when a girl leaves school at sixteen or seventeen she should be thoroughly prepared to become the best possible wife and mother at eighteen. In the writer's opinion this is the age at which every woman ought to be married, instead of waiting until twenty-six or twenty-eight. What has made the average marrying age gradually rise from sixteen to twenty eight during the last hundred years? What has made the divorce rate gradually increase during the same time? Simply because women have been gradually educated to want more and to be able to do less, so that marrying a poor young man for love is

no longer possible or even desirable. A highly educated woman of eighteen has intellectual and other requirements which few men under thirty-five or forty can afford to give her; the consequence is that for the next ten years she ruins her remaining health by all afternoon card parties and all-night dancing parties, in darkened and badly ventilated rooms, under the idea that she is having a good time, while the man whom she should have been glad to marry is losing not only his body but also his soul in the many ways which are only too well known to all. When such an old maid and such an old bachelor get married, which they unfortunately sometimes do, what do they want with children? They have been living for themselves all their lives, and it is too late to learn to live for others now. If they had been married at eighteen and twenty-five respectively, they could have adapted themselves to each other, and the six or eight children would have been so many bonds to unite them until they were parted by death. The writer knows several hundred women with large families who are perfectly happy, but not one of them is highly educated. Is it any wonder then that he is in favor of less high education, more manual training, simpler methods of living, earlier marriages and more children. It may be justifiable for men to exchange a little of their health for higher education, although even in their case it is doubtful, for many of our most successful men left school with much health, but little education. But so far as the race is concerned, health is not so important for the man as for the woman, for in God's providence she has to furnish all the material for the growth of the child before birth and for a year after. If her own brain requires an extraordinary supply of phosphates, there will be none left for her little one.

I have already shown how higher education renders wifehood and motherhood distasteful, owing to defective development of the sexual organs; let me now call attention to the fact that it is making these duties and privileges exceedingly difficult. Higher education of women is making motherhood more difficult, not only because it is increasing the ability of the nerves to perceive pain more keenly, but because the pains of labor are actually greater than they were a century ago. As I said, in the words of Dr. Herman, of London, in my paper before the Southern Surgical and Gynecological Association some ten years ago: "Under civilization, a new type of disease has sprung up among women who are accustomed to have everything done for them and to do little themselves; persons who think and feel a great deal, but act little."

Over-sensitive nerves and weak muscles are partly inherited and partly the result of training; of a training, which instead of making a child into a good animal, has been, perhaps not intentionally, directed towards developing the mind and hindering the growth of the body; a training which develops complexity of nervous structures instead of nervous energy. It is the result of a childhood spent in learning a great deal and doing a very little." Instead of training women to be strong, tall and muscular, with good appetites and the power of sleeping well, the whole tendency of modern education is to depress and mortify the flesh in order to exalt the spirit. The result is that anything the muscles have to do is done with great difficulty, while whatever the nerves have to do is done well. It is not surprising then that such a complex process as labor, depending as it does upon the nervous and muscular system, should be affected injuriously by an education whose sole aim seems to be to exalt the nerves and depress the muscles. The process of dilatation of the os uteri, which among uneducated women goes on quietly and without sufficient pain to prevent them from attending to their occupations, becomes in the highly educated woman a long and agonizing process, owing to the increased sensibility; there is a great outcry with very little work. Owing to defective nutrition, the membrane breaks at the very beginning of labor, so that the waters escape and dilatation must take place by the direct pressure of the child's head, instead of by the beautifully equalized hydrostatic pressure. The pressure of the child's head being greater at certain points than at others, the stretched cervix is lacerated. In the writer's opinion, laceration of the cervix could not possibly occur if the cervix were normal, and if dilatation were performed by the bag of water, and if neither fingers nor instruments were introduced within it. If the bag of waters were strong enough to remain intact until the perineum is also dilated, as he has seen it occur among the uneducated classes in Canada, rupture of the perineum would not happen either. This too early spontaneous rupture of the amniotic sac means a dry labor; and a dry labor is a very exhausting one, and too often followed by the application of the forceps, before dilatation is complete, and this, in turn, generally means a badly ruptured perineum.

At the Boston meeting of the American Gynecological Society a few weeks ago, one of the speakers with a large obstetric practice, admitted that it was impossible for the

majority of his patients to have a normal labor, on account of the severity of the pain and the weakness of the muscles.

There is yet another way in which the sedentary life which the higher education of women entails, renders maternity difficult, and that is by reducing the size of the pelvis. It is a law of physiology that the more that muscles are used, the larger they grow, and not only the muscles, but the bones to which those muscles are attached, also develop. When children are kept many hours a day sitting at a desk, their abdominal muscles are not used, and consequently they atrophy; in girls this is a serious matter, for the round muscles of the uterus only contract when the abdominal muscles do so, being supplied by the same nerves. As the keeping of the uterine fundus forwards where it ought to be depends upon the contractile power of these little cords, and as the slightest exertion will push the uterus back if these cords fail to do their work, weakness of the round muscles almost surely entails retroversion. Of course, retroversion means that the bowels come upon the anterior surface of the uterus and drive it downwards, until it is lying on the pelvic floor, almost at the outlet of the vulva. If, on the other hand, the round muscles are used hundreds of times a day, as they undoubtedly are when girls are running and playing and jumping, they would be well developed, and so strong that they could pull the fundus forward in normal anteversion, until it touched the pubic symphysis, before the bowels had time to be forced by intra-abdominal pressure in front of it. The uterus can stand an unlimited amount of pressure on its back, because the symphysis pubis then receives the weight of it, while it can bear very little on its anterior surface because there is nothing to stop it from falling backwards, until it is lying helplessly on its back on the pelvic floor. As a rule retroversion incapacitates a woman from performing her duties, and yet how common this condition is may be judged from the fact that the writer has had to operate on over five hundred cases, besides five hundred others whom he has cured by pessaries and other means. That the trouble is increasing as education increases may be inferred from the fact that twenty-five years ago it was so rare for a young girl to have any disease of the womb, that we seldom felt justified in making a vaginal examination; while now, so large a proportion of the cases are young girls, that we are justified in examining them whenever hygienic treatment fails to cure them in a reasonable time.

In conclusion, I am happy to say that, owing to recent im-

provements in methods, my remarks do not apply with so much force to the great colleges for women, such as Bryn Mawr, Vassar and Wellesley, where special attention is paid to the physical development of the girls. But even they have at least the defect of making the women who graduate from them superior to the men whom they should marry, so that, failing the realization of their ideal, they do not marry at all, while if they do, the husband is not the head of the family, which is a misfortune. My remarks apply with greatest force to the girls in the High Schools, many of whom are competing for positions as teachers, and of whom the mental strain is making physical wrecks. It would be far better, in the writer's opinion, for those girls to qualify themselves for becoming wives and mothers, and to leave the teaching of boys at least to men, who would then be paid much better salaries, enabling them to marry, and have happy homes.

248 Bishop Street.

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#### THERAPEUTIC HINTS FROM BACTERIOLOGY.\*

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BY G. R. CRUCKSHANK, B.A., M.D., L.R.C.P., EDIN., WINDSOR, ONT.

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By immunity is meant resistance to disease. It may be absolute or partial. I propose to mention, very briefly, typical experiments with reference to immunity, and, from the standpoint of the general practitioner, to comment on their bearing upon treatment.

Infection, inoculation, vaccination remain the best means to experimentally cause immunity.

Rats are immune to anthrax, but if fed upon a strictly vegetable diet they become susceptible. If fed upon meat their immunity is increased. If a meat diet overcomes anthrax, may we not expect the twentieth century scientists to evolve a diet inimical to tubercle?

Repeated injections of small amounts of toxin sometimes render an animal immune to hundreds of fatal doses.

Heat modifies bacilli anthracis so as to make them harmless

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\*Read at meeting of Canadian Medical Association, Vancouver, B.C., August 23rd to 26th, 1904.

to a cow while rendering her immune to lethal doses. In a similar manner rabies and symptomatic anthrax are disposed of. Vaccinations have been elaborated to protect against cholera, plague and typhoid. Vaccination for typhoid might interest us in circumstances similar to those at the siege of Ladysmith.

If rabbits are infected with anthrax and then injected with a culture of *bacillus prodigiosus*, they will recover. Attempts to apply this principle to the treatment of cancer and other diseases have proved futile. This still promises much.

Immunity can be developed experimentally by serum from immunized animals. This has been the greatest triumph of the laboratory. The success of diphtheritic antitoxin was the medical achievement of the end of the century. Antistreptococcal serum is useful in septicemia and mixed infections generally. Anti-tetanus serum merits a trial.

If a portion of crushed spinal cord be suspended in saline solution and mixed with tetanus-toxin, its fatal power is lost. I have not heard of any application of this principle, nor of the experiment where carmine is mixed with tetanus-toxin, 5 gm. to 10 c.c., ten fatal doses being injected into a guinea-pig without harm.

These are practically all the experiments to increase immunity. Is it not strange that we cannot feed some drug to an animal to increase its resistance to disease? No medicine that I have heard of has such an influence over a bacterial disease as quinine has with malaria.

There are many ways of lessening immunity. A fowl is immune to all the tetanus-toxin the germs can produce in its body, but dies if an unlimited amount of toxin is introduced. A guinea-pig under bad hygienic conditions dies with a smaller dose than one with healthful surroundings. Rabbits confined to a cage over a privy died from a dose of typhoid bacillus that was harmless to a fresh-air rabbit. The white rat is immune to anthrax, but after being exhausted in a treadmill becomes susceptible. Fowls are immune to anthrax, but become susceptible after a cold bath. Removal of the spleen or other organs reduces an animal's immunity. I wonder has the fashionable removal of organs any such influence? Diabetes favors carbuncles. Typhoid favors pneumonia. Traumatic injury makes infection possible. Rabbits kept drunk on alcohol die with a smaller dose of streptococcus pyogenes than would have any influence on a sober rabbit. Frogs, pigeons and dogs, immune

to anthrax, become susceptible under the influence of curare, chloral or alcohol.

Immunity, then, is decreased by excessive amounts of toxin, bad hygiene, bad air, bad diet, fatigue, cold, operations, trauma, mixed infection, drugs, and is experimentally increased by infection, inoculation, habitation, vaccination, anti-xin, different germs, crushed tissue, inert substances and diet.

In a bacteriological laboratory it cannot be shown that drugs help an animal to resist disease, but it can be shown that they sometimes reduce this power. Experimentally, there are many means which profoundly modify immunity, and I, as a family physician, believe these are the very means we should use in the treatment of bacterial diseases, and that the giving of medicine is often a bad habit. Never before were such diseases as scarlet fever, typhoid or pneumonia so well treated, and they are best treated by the physician who attends to the points emphasized by experiments on immunity. Now, there is only one cure for diphtheria, one way to manage small-pox. The consummation of research and experiment places fresh air as the best treatment for tuberculosis. Until further discoveries are made in bacterial diseases, the only medicine of much use is one that is a food or a wash to cleanse a nidus of infection. I mention these experiments as an excuse for saying that we use too much medicine. Dr. H. H. Wright, late Professor of Medicine, Toronto Medical School, told me that he had not prescribed a cough mixture in twenty years.

The nineteenth century physician asked a few questions, felt the pulse, looked at the tongue, and charged from fifty cents to two dollars. He of the twentieth century will examine his patient for half an hour for two or three days, will call to his aid several laboratories, and then give his patient careful advice, for which he will charge from twenty-five to one hundred dollars. In both cases the patient pays exactly for what he gets.

Public opinion of disease and treatment is what is learned from physicians. There can be no doubt the virtue ascribed to drugs by the public is often a gross superstition.

ABSTRACT OF PAPER REPORTING 615 CASES WITH  
OPERATIONS DONE AT THE ALBANY HOSPITAL  
FROM MARCH 1, 1902, TO MARCH 1,  
1903, WITH REMARKS.\*

BY ALBERT VANDERVEER, M.D., OF ALBANY, N.Y.

This paper is intended to illustrate a service of ten months at the Albany Hospital, in which I was aided by my assistant attending surgeon, Dr. Edgar A. VanderVeer, although not including any of his own operations; also to present an example of the variety of cases that come under the observation and treatment of the general surgeon, as we understand his work to-day. Other surgeons connected with the hospital as members of the staff are doing the same line of work. Time is so limited that I can only give a synopsis of the points that seem to be of greatest interest in the classification of these cases. If we take up the more important groups as they present, I feel that we will make the best use of the time allotted.

I shall make no effort to refer to cases of fracture, except in a general way. Fractures of the thigh are invariably treated by extension and coaptation splints. Fractures below the knee are usually treated with plaster-of-Paris dressing. Colles' fractures and fractures of the forearm are usually treated with anterior and posterior splints and extension; fractures of the elbow-joint, with internal angular splint. Fractures of the shoulder-joint and of the humerus, with the shoulder cap and internal lateral splint of felt or other like material. Fractures of the skull are treated promptly. When there is a suspicion of depression, trephining is done; hemorrhage is treated, gauze-packing used, if necessary, and with a rubber drainage-tube to afford drainage. In fractures of the upper and lower jaw, most decidedly satisfactory results have been attained by employment of the interdental splint, used by dental surgeon, Dr. Leroy Blatner.

There was a total of eighteen tumors of the neck; three of the thyroid required thyroidectomy, and the patients made a good recovery; seven of tuberculous glands, these patients made a good recovery after thorough removal of the glandular struc-

\*Read at the annual meeting of the New York State Medical Society, January 26, 27 and 28, 1904, and published by courtesy of writer and *American Medicine*.

tures; there were two cases of lympho-sarcoma and six cases of chronic adenitis requiring operation; all of the patients recovered. There was a total of nineteen tumors of the breast, thirteen true carcinomas, four adenomas, one round-celled sarcoma and one true fibroma; all the patients recovered. In operations for malignancy, we are very thorough in removing the axillary and subclavicular glands, and in most cases the pectoralis major and frequently the pectoralis minor muscles. This number of operations for tumors of the breast is not up to the average of other years.

There were 168 cases of abdominal section in which the peritoneum was opened. Of this total there were twelve gall-bladder cases, eight of them gall-stones, in which cholecystotomy was done, each patient recovering; three cases, two of which gave symptoms of gall-stone trouble, yet upon exploration no stones were found. The gall-bladder was attached to the incision, drainage established, and, ultimately, these patients made a good recovery, with relief of their former pain. An exploration was done in the remaining case of this group of three, the gall-bladder was found very much contracted, deep underneath the liver, and with many adhesions, but no stones were found. The patient died afterward of hemorrhage, but with no evidence of malignant disease. There was a case of biliary sinus in which curement was done, and an application of full strength carbolic acid made, the sinus ultimately healing. I would say that I have seen most excellent results in the treatment of biliary sinuses by the use of full strength carbolic acid, introducing from five to ten drops into the sinus once in three or four days. Of this group of gall-bladder cases there was an exceedingly interesting one, the history of which is as follows:

H. E., aged sixty-two, native of Germany, and tailor by occupation. A gastroenterostomy was done for carcinoma of the pyloric end of the stomach; the gall-bladder, which was found distended and containing a number of gall-stones, was brought up into the median incision, the same as in an ordinary case of cholecystotomy, and drainage was established in this way. The patient ultimately made a most excellent recovery. At present, June, 1904, he has gained in flesh and is very comfortable.

There were four uncomplicated cases of gastroenterostomy done for carcinoma of the pyloric end of the stomach, and of these three resulted in good recovery, the other patient dying at the end of the fourth day from exhaustion, her condition being very serious at the time of the operation. There was one

case of gastrophtosis, three cases of exploratory incision, in which the liver was implicated with the carcinoma of the stomach to such an extent that it was impossible to proceed to any further operative intervention, and these patients all recovered from the incision.

There were thirty-three operations for uterine fibroids, three patients dying. In connection with these thirty-three cases there were three of complications in the form of gall-stones, in which cholecystotomy was done at the same time, all the patients recovering. Of the patients who died one had a very large tumor, one was in a feeble condition, and the third, while not having a large tumor, was evidently suffering from typhoid fever at the time of the operation, and died from this latter complication. This case presented many strange features. In reference to operations for uterine fibroids I would say that I usually tie the ovarian artery, then the vessels of the broad ligament, the uterine artery on each side, and remove the uterus as low down toward the cervix as possible, closing the stump with interrupted silk sutures and suturing over the peritoneum from one side to the other of the width of the incised tissue. I prefer to leave the cervix if it is healthy, and in this way preserve the vault of the vagina. I believe that patients do better in their permanent convalescence.

The following cases I believe are of sufficient interest to report at this time:

Mrs. C. G. S., aged sixty, native of United States, and housewife by occupation. Diagnosis papillomatous ovarian cyst, with gall-bladder complications. Ovarian cysts first removed. Gall-bladder explored and found to contain a large number of stones, ninety-six in all. She had been ill for about six years with no diagnosis or supposed symptoms of gall-stones. Papillomatous cyst returned in less than a year, when another operation was done, and later, Coley's fluid was used very thoroughly, but death finally resulted. This was the third or fourth case of sarcoma in her family of sister and nieces. Dr. Macdonald and myself have since operated upon another sister for double papillomatous ovarian cyst, this patient making a good recovery.

Mrs. G. F., aged thirty-five, native of United States, housewife by occupation. Diagnosis myoma of uterus. She has had attacks of biliary colic since a child, but not so severe until four years previous to present illness. History of fibroid of about two years standing. Gall-bladder distended with stones. Chole-

cystotomy done and patient had a long convalescence, suffering from many hallucinations, but now is in good health.

In these cases of uterine fibroid and other conditions complicated with gall-stones, after one has made the median incision and completed the operation, it is a very easy matter to pass the hand up to the gall-bladder, discover the true condition there, and, if desirable, operate. A quick incision may be made through the abdominal wall and the gall-bladder easily reached, simplifying the operation quite decidedly.

Of cases of ovarian cysts there are fourteen in which the tumor sprang from one ovary only, and ten cases in which both ovaries were implicated, these being cases of double ovarian tumors. This is rather an unusual average. All of these patients, twenty-four in number, recovered.

There were fifteen operations upon the ovaries for pus tubes, all of the patients recovering. There were fifteen operations upon the appendages *i.e.*, removal of the ovaries and tubes, due to previous pelvic peritonitis and abscesses, all of the patients recovering.

There was a total of fifty-six cases of appendicitis. Of the acute cases, in which the symptoms had lasted from one to two and four days, there were twenty-nine. These cases were made up of perforations, foreign bodies in the appendix, gangrenous condition of the appendix, with pelvic and general peritonitis, and of these twenty-eight patients recovered, the one death being due to general peritonitis.

There were nine cases of subacute appendicitis, *i.e.*, cases in which the operations were done soon after recovery from an attack, and in which there was yet a condition of inflammation present, all of the patients recovering. There were eighteen cases of the relapsing, chronic form of appendicitis, all of the patients recovering.

Of operations for hernia there were thirteen direct and indirect inguinal, two femoral and three ventral. In the latter, abdominal section had been done; one, my own case, and the other two belonging to other surgeons; all of these patients recovered. The usual operation has been that of the Bassini method and no truss worn afterward.

There were two cases of bicornuate uterus, the histories being as follows:

Mrs. W. S., aged thirty-seven, native of the United States, and house-wife by occupation. Patient gave no unusual history. She had suffered from supposed stomach trouble for some time.

but eructations of gas always afforded relief. She was operated upon for lacerated cervix at St. Luke's Hospital, New York, just previously. She came to Albany Hospital, January 8th, 1903, presenting symptoms as follows: Endometritis, fibroid and gall-bladder trouble. The patient was placed on the table in the lithotomy position. Left side of external os was very badly lacerated. Uterus was cureted out in the usual manner, a V-shaped piece removed from the left side of the cervix, and the incision brought together by means of three chromicized catgut sutures. Median incision was then made for supravaginal hysterectomy. Upon opening the abdomen a careful examination of the pelvis disclosed a double uterus, right—which was supposed to be the fibroid—evidently containing a fetus of about six weeks. The right ovary and tube, as well as the left, were so badly damaged that supravaginal hysterectomy was required. Examination of gall-bladder revealed gall-stones. Usual incision, 4 cm. long, parallel with border of the ribs, was made. Several gall-stones were removed in the usual manner. Patient made a good recovery.

Upon examination the appendix was found normal. Examination of double uterus showed a fetus of about six weeks in the right side. Left uterus contained packing from curetment.

Miss H. W., aged twenty-eight, native of the United States, and teacher by occupation. In September, 1902, the patient had had the appendix and right ovary removed. She came to the Albany Hospital January 28th, 1903, with symptoms of a floating kidney. Exploratory incision for floating right kidney was done February 2nd, 1903. Upon opening the abdomen and exploring the old incision, the point of a hypodermic needle was felt and removed from the right side of the abdomen. This had evidently penetrated into the peritoneal cavity. Stump of appendix was in normal condition; right ovary and tube absent; left ovary and tube rudimentary. Bicornute uterus was also discovered, but not removed. Movable kidney was found on the right side. Gall-bladder and liver were in normal condition. All adhesions were broken up, and remnants of the old scar dissected out.

The patient's strength permitting, February 17th, 1903, the usual lumbar incision 4 cm. long, was made. Kidney fat was exposed, a large amount removed, and the right kidney brought up into the wound. The capsule was split, edges fastened with interrupted catgut sutures to fascia, and the wound closed in

the usual manner. The patient made a good recovery, and later reported happy and free from all pain.

*Case of Undescended Testicle.*—Mr. R. E. J., aged fifty-one, native of Wales, and a slate maker by occupation, entered the Albany Hospital, January 10th, 1903, complaining of inguinal hernia and undescended testicle. Patient gave the following history: For six months previously he had some trouble in the right groin, with pain and distress in the region of the testicle. He is the father of nine children, alive and well; prior to present illness patient's health has been good. There was much tenderness in the region of the right testicle, and examination showed an undescended testicle on the right side, with hernial mass in the inguinal canal. Operation, January 21st, 1903. Usual incision for inguinal hernia, 6 cm. long, was made. Upon opening the inguinal canal the testicle was found very adherent to the inguinal sac. The cecum protruded into the hernial sac, and the appendix was also found in the sac. The appendix contained a fecal concretion midway of its length, and was in a state of chronic inflammation. The appendix was separated from the cecum and hernial sac with difficulty, and removed in the usual manner. The hernial sac was dissected out as much as possible, and the undescended testicle and cord then dissected off from the hernial sac and removed in the usual manner. All three were so matted together that dissection was very difficult. The cecum and remnants of the sac were reduced into the abdomen and the wound closed with layer sutures, number three catgut being used in deepest sutures. Standard dressings. Pathologic report showed subacute appendicitis with chronic periorchitis. The patient made an uninterrupted and complete recovery.

Of diseases of the vagina there were five cases of cystocele and rectocele.

There was an unusual number of cases of epithelioma of the vulva and walls of the vagina—eight in all; most of these patients I operated on successfully, so far as the primary results go. In this class of cases I do not know of any condition more fatal. Although the glands and surrounding tissue may be removed with ever so much care, yet the disease returns or metastasis takes place. There were two cases of vaginal hysterectomy for cancer of the cervix; both patients recovered. For some time we made use of the angiograph in doing this operation, but of late we are returning to the use of the ligature, as we especially

Time will not permit me to speak of the eighty-five cases of

endometritis, complicated with laceration of the cervix and of the perineum, or the different flexions, together with stenosis of the external os.

There was an unusual number of cases of tuberculous disease of the bones and joints—thirty-two in all. In regard to the operation in these cases, we are greatly in favor of free incision into the medullary portion of the bone, making thorough use of iodoform.

In cases of sarcoma we have made thorough use of Coley's fluid, and perhaps with some success in one or two cases. In secondary deposits of carcinoma the Roentgen ray treatment has been followed out very thoroughly, with disappearance in many cases of the secondary deposits, but as yet we cannot report a case of absolute recovery.

It will be noted there was a mortality in the cases of uterine fibroids, but the percentage of recoveries is so markedly increased compared with five or ten years ago, that we have every reason to be encouraged, and to continue this line of work. The mortality list is largely associated with cases that have been delayed too long, in which the tumor has grown to great size; large venous trunks developing in the broad ligament; pressure upon the ureters; distention of the pelvis of the kidneys; pressure upon the rectum; in some cases producing pelvic peritonitis and increasing the number of adhesions. At times these cases become complicated with appendicitis. Then, in other cases, continued loss of blood brings the patient to us in such an anemic condition that while she may bear the operation and come off the table safely, and transfusion in some form is done, or the infusion of normal salt solution, still she dies from shock, or within a few days, the heart being unable to continue its work. In the cases in which large venous trunks develop, these patients sometimes suddenly die from venous thrombosis. While apparently doing well, sudden death ensues. As a result of pelvic peritonitis these large fibroids, and also fibroids connected with the broad ligaments often become adherent deep down in the pelvis, and are exceedingly dangerous to attack. In these latter cases the ureters are likely to become implicated at the time of the operation. Although my group of cases escaped any such complications, yet it is one of the serious results arising from delay in operating.

In all these cases of pelvic surgery it is becoming more and more my practice to examine the appendix, and if there is the least suspicion of disease, or if it is at all abnormal, to remove

it, so that in the cases of operations upon the appendix the number would be increased to something like seventy. In fact I reported the individual cases in which, while removing the fibroid, pus tubes, or ovarian cysts, I also removed the appendix.

As stated, time does not permit my speaking of congenital deformities, treatment of hemorrhoids, prolapse of the rectum, fissure and other surgical lesions of the rectum; diseases of the genito-urinary tract, such as urethral stricture or vesical lesions; the various operations upon the kidneys; operations upon the nerves for relief of neuralgia, etc.; also the various abscesses connected with the cavities of the body; varicocele and tumors of the scrotum in the male. No reference can be made to the various amputations that come with the surgical lesions and present in hospital practice.

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#### DR. WILLIAM OSLER, THE NEW REGIUS PROFESSOR; HIS LIFE AND WORK AT JOHNS HOPKINS.

That Dr. William Osler, of Baltimore, whose recent appointment by King Edward as Regius Professor of Medicine at Oxford University, has awakened national interest in two countries, at least, will within a few months, or possibly a year from the time he enters upon his new duties, be knighted, is whispered in the circles where the great physician's intimates are to be found.

More than that, it is understood that the peerage will, in him, be given another member ere many years have flown by.

Dr. Osler, it is definitely announced, will sever his connection with Johns Hopkins Hospital next June, and will assume at once his new office under the patronage of His Majesty.

In several ways Dr. Osler may be called the first physician in America. By many he is considered the greatest medical man in the United States, and in his own particular line, that of consultant and teacher, as the greatest in the world. He is the first American physician upon whom has been bestowed an honor like that approaching the regius professorship by any foreign country. The distinction which comes to him by favor of the King of England is the very greatest that can come to any medical man in the world, and it is gratifying to the recipient and his friends that not a word of criticism, in any country, has been uttered, and this in the face of the fact that Dr. Osler's name will lead the

list of all the great names in the medical profession of England during the remainder of his life.

Among medical men everywhere, the regius professorship of Oxford is considered the highest reward, and the consummation of the loftiest ambition a physician may aspire to. Aside from the great honor there is a material side to it which any physician might well covet. The salary attached to the position is relatively small—\$10,000 per year—but medical men say that the practice which comes unasked to the chair holder is worth ten times as much.

#### DUTIES OF REGIUS PROFESSOR.

Beyond the mere money question, however, is the congeniality of the life it embraces for a man of the scholarly ambitions of Dr. Osler. At his disposal is not only the time but the opportunity for research work that he so highly prizes. He, as regius professor, is practically a free lance. He comes and goes as he sees fit. He is not held down by arbitrary rules or regulations. He is the chairman of the faculty, subordinate to no one on earth—not even the King. He conducts either personally or by deputy all examinations and no one may receive a degree that is not signed by the regius professor. He is considered throughout the British Empire as the highest medical authority, not only of the King's realms, but of the entire world. He is the one the King most delights to honor when occasion demands.

Dr. Osler, in a letter to a friend recently, said: "If success consists in getting what you want and being satisfied with it, my life has been a success." This will do away with the idea that Dr. Osler was at any time averse to accepting the honor King Edward has bestowed upon him.

#### ALWAYS A BRITISH SUBJECT.

The new regius professor was born in Canada and has ever maintained his loyalty to the British Government. His son was registered at the British consulate in this city. He married the widow of the famous Dr. S. W. Gross, of Philadelphia, who, before her first marriage was Miss Grace Lindsee Revere, of Boston. Most of his later professional career has been divided between Philadelphia and Baltimore.

Dr. Osler is not an old man—he is 55—and as his constitu-

tion is of the rugged kind that means great longevity, he it is hoped will long enjoy the fruits of his patient energy. The departure of Dr. Osler from Johns Hopkins will be a heavy blow, and the faculty will have the greatest difficulty in the selection of his successor.

Dr. Osler was born at Bondhead, Ontario, July 12, 1849. His father was a clergyman of the Church of England, Rev. F. L. Osler. The son has always been a member of that church. His earliest school life was passed in the school of his native village, and then he went to Port Hope, Canada, for a term or two in the Trinity College School at that place. Later he entered Trinity University at Toronto where he took his academic degree. As a student in those early days Dr. Osler was a hard worker during working hours, but when the time came for recreation none was more enthusiastic than he in those pursuits. Dr. Osler was in no wise a precocious child, but he won the regard of his teacher and fellow pupil alike by his honesty, industry and singleness of purpose, with which were combined well-maintained ability to grasp the subjects as taught. Vacillation has been foreign to his character always.

#### WORK DAY BY DAY.

In after life, when he taught others, he has consistently maintained by precept and by practice that to succeed one must do well what lies at hand without thought of what may confront one on the morrow. "Love to labor" has been one of his favorite maxims, for his own as well as for the guidance of his students. He is a firm believer of doing one thing at a time and doing it well, and by doing nothing in a matter that is not worth one's best efforts. Addressing a body of students recently, Dr. Osler said:

"As to your method of work I have a single bit of advice which I give with the earnest conviction of its paramount influence in any success which may have attended my efforts in life —'take no thought of the morrow.' Live neither in the past nor in the future, but let each day's work absorb your entire energy and satisfy your wildest ambition. The student who is worrying about his future, who is anxious about his examinations, doubting his fitness for the profession, is certain not to do as well as the man who cares for nothing but the matter in hand and who knows not whether he is going."

## HIS CAREER AT MCGILL.

After leaving Trinity College, Dr. Osler decided upon the medical profession as his life work, and he entered the office of Dr. Bovell at Toronto as assistant and student. Here he remained three years and then entered McGill University in Montreal, where he graduated in 1872. He then went to London, Berlin and Vienna, taking special courses in physiology and pathology. Upon his return to Canada in 1875, Dr. Osler was elected to the chair of the Institute of Medicine at McGill University. Twenty-four years later, addressing the faculty of that college, Dr. Osler referred to his appointment in the following terms:

"A quarter of a century ago this faculty, with some hardihood, selected a young and untried man to deliver the lectures of the Institute of Medicine. With characteristic generosity, the men who had claims on the position by virtue of service in the school, recognizing that times were changing, stepped aside in favor of one who had had the advantages of post-graduate training in the subjects to be taught. This experiment on the part of the faculty, enthusiasm and constitutional energy on my part, led to a certain measure of success.

"My first appearance before the class filled me with tremulous uneasiness and an overwhelming sense of embarrassment. I shall not forget the nice consideration of my colleagues and the friendly greeting of the boys, which calmed my fluttering heart. One permanent impression of the session abides—the awful task of the preparation of about one hundred lectures. After the ten or twelve with which I started had been exhausted, I was on the treadmill for the remainder of the session. False pride forbade the reading of the excellent lectures of my predecessor, Dr. Drake, which with his wonted goodness of heart, he had offered. I reached January in an exhausted condition, but relief was at hand. One day the post brought a brand new work on physiology by a well known German professor, and it was remarkable with what rapidity my labors of the last half of the session were lightened. An extraordinary improvement in the lectures was noticed; the students benefited and I gained rapidly in the facility with which I could quote the translated German.

"Four years later I was appointed on the visiting staff of the Montreal General Hospital. What better fortune could a young man desire! I left the same day for London with my dear old friend, George Ross, and the happy days we spent to-

gether working at clinical medicine did much to wean me from my first love. From that date I paid more and more attention to pathology and practical medicine and added to my courses one in morbid anatomy, another in pathological histology, and a summer class in clinical medicine. I had become a pluralist of the most abandoned sort, and by the end of ten years I was difficult to say what I did profess, and I felt like the man to whom Plato applies the words of the poet:

“‘ Full many a thing he knew;  
But knew them only badly.’

“ Weakened in this way, I could not resist when temptation came from pastures new in the fresh and narrower field of clinical medicine. After ten years of hard work I left Montreal, a rich man—not in this world’s goods—for such I have the misfortune, or the good fortune, to lightly esteem, but rich in the goods which neither rust nor moth have been able to corrupt—treasures of friendship and good-fellowship, and those treasures of widened experience and a fuller knowledge of men and manners which contact with the bright minds in the profession necessarily entails. My heart, or a good bit of it, at least, has stayed with these treasures.”

This charming bit of speech, besides containing interesting biographical material, indicates the modesty and cordial nature of the great physician.

Dr. Osler’s reputation as a teacher spread beyond the confines of the Canadian University, and the bright star of fame had already appeared above his horizon before he rounded out the fifth year of his professorship at McGill. The first bright ray came in 1883, when he was elected fellow of the Royal College of Physicians of London, England, and this was followed in 1884 with his selection as Galstonian professor. Honors came to him fast, but he remained the same sensible, cool-headed and affable gentleman that he is to-day.

#### HIS VISITS TO EUROPE.

Almost every summer Dr. Osler takes a trip abroad and travels leisurely about the Continent. This habit began as far back as 1882, and on one of his numerous visits to London he met Dr. S. W. Gross, of Philadelphia. Dr. Gross was at that time famous as a consulting physician, and was at the head of the Jefferson Medical College at Philadelphia. A strong friend

ship sprang up between Dr. Gross and Dr. Osler, and in October, 1884, the former sent for Dr. Osler to go to Philadelphia. He complied and was then informed that on recommendation of Dr. Gross he had been appointed to the professorship of clinical medicine at the University of Pennsylvania. Dr. Osler promptly accepted.

A few years later, Dr. Gross died. In May, 1893, Dr. Osler married his old friend's widow. Mrs. Osler comes from the very best of the older families of Boston. She is a woman of more than usual beauty and as charitable as she is beautiful. To her efforts largely the women of Maryland were interested in the fight that has been inaugurated against the dread tuberculosis. Due to her efforts, many rich women were interested in the situation and gave liberally in support of her project to build and maintain, in the Blue Ridge Mountains, a number of model homes for consumptives, whose means did not permit the environment needed in their cases. Dr. and Mrs. Osler have one son.

#### GOES TO JOHNS HOPKINS.

Dr. Osler remained at the University of Pennsylvania until October, 1889, when he was invited to create the chair of Professor of the Practice and Principles of Medicine at Johns Hopkins Medical School, and promptly accepted. At that time the new methods of instruction in the matter of original research by the students of Johns Hopkins, which were an innovation in university teaching in America, were attracting world-wide attention. Dr. Osler's reputation had, at that time, placed him in the front rank of medical men, and seeing the great field that lay before the Baltimore University, and recognizing the opportunity presented to those who desired to explore new fields and carry scientific investigation as far as it was possible to carry it, he took up his residence in Baltimore so as to be near the scene of his work.

His success at Johns Hopkins immediately attracted world-wide attention. He soon took a place in the very front rank of the greatest medical men of his time. In 1898 he was elected dean of the Medical Faculty of Johns Hopkins. Apart from his numerous duties at the school his practice rapidly assumed such vast proportions that he was compelled to adopt a system as strict and arbitrary as governs the management of a large corporation. His hours of consultation are crowded as full as possible and every day people who wish to see him are turned away disappointed. The only sure way to secure an audience with Dr. Osler is to

make an appointment several days ahead. The demands from other cities upon Dr. Osler are many. Scarcely a case of unusual importance appears in America that effort is not made to secure at least the advice of Dr. Osler. After the shooting of President McKinley, Dr. Osler was called to Buffalo.

#### HIS LITERARY WORK.

This great amount of work to which have been added his literary labors, has proved a mighty strain upon his physical resources, and it is considered well from this point of view, at least, that he should go to the quiet walks of the venerable institution to which His Majesty has summoned him, and where his work will be less exacting.

"A fitting end to a great career" is the way several of his colleagues refer to Dr. Osler's new work. It means for him a longer and quieter life than he could hope to find in America where the conditions are so different.

Great things are expected of Dr. Osler in a literary way during the next decade. This will be the opportunity of a lifetime devoted to study, to put into enduring form the ripest and best experiences and the deepest knowledge which have come to him.

As a writer, Dr. Osler is forceful and polished. He prefers the simplest and most easily comprehended words, and his essays make beautiful and refreshing reading. His published works are as follows:

- Cerebral Palsies of Children, 1889.
- Principles and Practice of Medicine, 1892.
- Teacher and Student. (Address), 1892.
- Oliver Wendell Holmes. (Address), 1894.

Last June Dr. Osler delivered the lecture on the Ingersoll foundation at Harvard. His lecture was "Science and Immortality." This lecture will be published in book form shortly, and is eagerly awaited. To his students, however, Dr. Osler is generous with his time and never fails to be with them at their smokers or entertainments when it is possible. He has a way of jotting down his ideas from day to day so that he is always ready, with the boys, to present to them something new. Another evidence of his generosity in this regard is that when invited to be present, and it is told him that the boys would like a short talk from him, that he prepares his remarks with the same care as though he were to address the highest group of authorities in the world. In a word, Dr. Osler believes in and practices thoroughness in everything he does.

## HIS METHOD OF TEACHING.

Dr. Osler's method of teaching is unique. He believes the greatest thing a doctor can know is to be able to tell what ails the patient, quickly, so that remedial effort may not be delayed. His lectures to the senior class which come under his personal care at Johns Hopkins are often filled with epigrams, but each emphasizes the point he desires to make clear.

Dr. Osler is not a genius in the sense of being an originator and discoverer, but he is a genius in being able to impart to others the results of the investigations of the medical fraternity. Once a week he takes his class through the hospital wards and asks it to diagnose the cases there met. He quizzes the boys and seeks to impress upon each the various indications and phases of each case and does it in such a manner to create a lasting impression. The greatest privilege known to the students of Dr. Osler's classes comes with each Saturday evening when they go in a body to his beautiful home and there sit about a miniature banquet table while the host talks by the hour upon various subjects. He has a charming way of getting at each student's ambitions and from the vast fund of his experience offers many timely and valuable suggestions as to how to do with this or that phase. Dr. Osler's magnificent library is ever open to the demands of his class. It is no wonder that he is idolized by his boys, as he affectionately calls them.

The famous physician is as free from fads as the most democratic gentleman of this day. He loves to dress well and he does. He is extremely particular about the fit of his garments and has a love for fresh ties and immaculate waistcoats. There is no false dignity about Dr. Osler. He loves a joke as well as the next man and can tell a good story in splendid style. He detests practical jokes and practical jokers. His favorite story is of the Irishman, brought to the hospital after his peculiar case had been abandoned by several of the leading physicians of the leading infirmaries of the country. Dr. Osler's approached the cot, and gazing at the peculiar growth on the man's chin, said:

"What is the matter with your chin, Mr. Hennessy?"

"Just as I expected," replied the patient. "I knew it was a waste of time and money to come here just to be asked what ails me. What in blazes are you here for?"

Dr. Osler is not one who believes in all work and no play. He frequently speaks to the student in this vein. "Do not become too deeply absorbed in your profession to exclude all out-

side interests. Success in life depends as much upon the man as the physician. The more you see of life outside the narrow circle of your work the better equipped will you be for the struggle. While medicine is to be your calling, see to it that you have also some intellectual pastime which will keep you in touch with the world of art or letters. Cultivate other pursuits, in moderation, outside of your profession. No matter what it is, have an outside hobby. When tired of anatomy, refresh your minds with Oliver Wendell Holmes, Keats, Shelley, or Shakespeare."

Upon the question of religion he has often said, "The only way to take the Bible is by simple faith. When you begin to reason it out you will surely become confused." Dr. Osler despises littleness and narrowness, and has often said that he devotes a half hour daily to communion with great minds of the present and past lest he fail to remember that broad mindedness should be a cardinal principle with every man. He loves the poets. Shelley and Shakespeare are his favorites.

Dr. Osler's hobby is the running down of first editions of old books. He will chase one of the species across the continent and never rest until he has gotten it. One of his chief delights is to rummage through the old book-stores of London. The result is a rare collection of the most famous books on earth.

Dr. Osler has a profound regard and admiration for the old style country doctor. Speaking on this subject one day to his class he said: "Many of you have been influenced in your choice of a profession by the example and friendship for the old family doctor or of some country practitioner in whom you have recognized the highest type of manhood, and whose unique position in the community has filled you with laudable ambition. You will do well to make such a one your example, and I would urge you to start with no higher ambition than to join the noble band of general practitioners. They form the very sinews of the profession—generous-hearted men with well-balanced heads, not scientific always, but learned in the wisdom of the sick-room, if not in the laboratories."

At the present time Dr. Osler is engaged upon the gigantic task of translating and editing Nothnagel's "Encyclopedia of Medicine." The series is to comprise twenty volumes. Six have been completed.

## Selected Article

### THE USE AND ABUSE OF PESSARIES.

BY A. M. LEONARD, M.D., PHILADELPHIA, PA.

There is no doubt that the medical profession is prejudiced against the use of the pessary. There is also no doubt that the abuse of this instrument in years gone by has been the cause of this dislike. Still it has proved itself so valuable an agent in properly selected cases in my hands that I write in its defence. I will say at the outset that this prejudice is largely confined to the younger members of the profession. When I graduated ten years ago I had a contempt for the pessary, and secretly thought that the man who used it was necessarily incompetent; but severe necessity has taught me otherwise. Eminent gynecologists are in favor of its use; for example, Mann has said: "There is a great deal of incredulity in the medical profession at large with regard to the good results which can be obtained from the use of the pessary. Without pessaries I should not know what to do for a considerable number of the cases that come to my office, and I should almost have to give up gynecology, although I might continue to do laparotomies."

Goodell in his lectures has placed great confidence in the use of the pessary, while Emmet has stated that the man who gets bad results from the use of the pessary does not know how to use it, the fault lying with the man, not with the instrument. Thomas has devised and recommended several forms of pessaries, and Skeene does not give them up, although he devotes much attention to their abuse.

In the first place we must know what we can do with the pessary, and not attempt to accomplish wonders. The pessary will not loosen adhesions or put back a uterus in its proper place. It should never be used as a repositor. This is the first mistake. It should never be inserted into a vagina where the uterus is bound down by adhesions, nor even where the uterus is in malposition. It is a cardinal working rule that the uterus must be in proper position before the pessary is inserted.

Again, great care must be exercised in the selection of the form of pessary and its size in the various cases. An ill-fitting,

awkward pessary can be the source of great harm. If the uterus is bound down by adhesions, there is absolute evil in the use of the pessary. It is necessary to place the uterus in proper position before its insertion. The common mistake is the use of a pessary which is too short. To understand this we must study its mechanism. Mann illustrated this fault very well some years ago, as follows:

"Let me illustrate by this sound a uterus in retroversion, my fingers representing the place at which the ligaments are attached. I can tilt the sound forward either by pressing forward on its upper portion or backward on its lower portion; in case of the uterus I cannot do this, for I cannot get my fingers behind the fundus to tilt it up without performing a laparotomy. But we can use the cervix as a handle to replace the organ, provided the uterus is rigid enough. The pessary goes in behind the uterus; it does not, however, as might appear, press upward on the fundus, for it is anatomically impossible for the pessary to push up so high in the posterior fornix of the vagina. I have opened the abdomen when the uterus was held in place by a pessary, and have been able to demonstrate that the pessary was not in contact with the uterus at all; I could even put my finger between the uterus and the pessary. The pessary acts simply by pulling up on the posterior vaginal wall, and thus indirectly drags the cervix upward and backward so as to act in the same way as if we had pushed on the front of the cervix. Now, you will understand from this explanation why it is that when a pessary is too short it will utterly fail to do good, for it does not pull the cervix backward and upward far enough. Moreover, if the pessary is not long enough, its upper bar does not reach high enough to push the uterus past its centre of gravity, and the version will be converted into a flexion; the uterus, so to speak, being doubled over the bar of the pessary. But if the uterus is pulled over far enough, this cannot occur. The pessary must be adapted to the vagina, and this organ differs as much in different individuals as any other organ.

"Do not rely on the pessary to replace the uterus; first reposit the uterus and then insert the pessary, having it long enough to keep the uterus in its normal position. One of the roughest-looking specimens of the medical profession that I ever saw was a country practitioner who knew more about the use of pessaries than almost any other physician I have ever met. He failed in one case simply because he did not know he could get a pessary large enough. He understood perfectly what the trouble was, and he was delighted when I opened a drawer in

which my pessaries are kept and handed him one not quite as large as a horse-collar. I gave him a few like it, and he was enabled to meet the indications in his case. A man must have a little natural mechanical skill and taste in order to use pessaries properly; and, in fact, a man without mechanical ingenuity ought not to undertake gynecological practice."

According to Goodell, and it is true in my own work, the best pessary is the old-time Hodge's closed lever pessary, or its modified form, Smith's; this pessary properly used is better than the cup and stem pessary, or that wretched instrument, the ring pessary. The reason for the excellent action of the Smith-Hodge pessary are seen if we will study its mechanics: when properly adjusted one end of the pessary impinges upon the anterior vaginal wall, while the other rests behind the cervix on the posterior wall of the vagina. While the pessary has a lever action, its powers are really two-fold: as it stretches the vagina upward and backward, it acts similarly on the cervix. The womb turns as a pivot on its ligamentous attachment at its central point, and hence the body of the womb is tilted forward. This makes the uterus itself a lever, with its fulcrum the attachment to the bladder. This tends to overcome retroversions, although not retroflexions unless associated with retroversion.

The lever action of the pessary itself is due to the fact that the power of pressure is applied to the long arm or lower limb of the lever by the visceral pressure on the anterior vaginal wall, while the fulcrum is the posterior vaginal wall, the short arm behind the cervix directly pushing up the weight of the body of the uterus. It is better for the lower limb to rest on the soft anterior wall of the vagina than against the posterior surface of the symphysis or the rami of the pubic bones. If the pessary is too large or wrongly curved, this is likely to happen, but not so commonly with the Smith modification.

With the respiratory act the descending diaphragm forces the abdominal viscera down upon the bladder, which in turn forces down the anterior vaginal wall and cervix; hence there is a gentle rocking movement to the pessary which is excellent in result. But it is obvious that the pessary should not injure the structures over bony points, and it should not be too large; if it is, it really becomes a ring pessary.

There are two curves in both the Hodge and Smith pessaries —one large, one small, suggesting the letter S; but Smith makes the small curve sharper than the Hodge, and hence the large curve should be introduced first and its end placed behind the cervix.

Goodell formulates the following rules, which the writer learned as a student and knows their value:

1. The uterine or upper end must rest always behind the cervix.

2. Always in the Smith pessary, and generally in the Hoberg, the uterine end has the large curve.

3. The concavity of the large curve must always look toward the anterior wall of the vagina, and the convexity rest upon its posterior wall.

4. When *in situ* the pessary should fit so loosely as to be freely movable and to admit the finger very easily between its anterior bar and the pubic symphysis.

5. In retroflexions the pessary must be long enough to span the angle of flexure in the womb and to press on the uterine body above the angle; otherwise the bent womb straddles the pessary and the flexion becomes worse.

6. After the introduction of a pessary the womb must always be put into its proper position either by the sound or by double palpation, viz., by a finger of the left hand in the vagina pushing the cervix backward, and by the fingers of the right hand hooking the fundus upward and forward through the wall of the abdomen. If this is not observed, more harm than good may be done.

7. If the womb does not stay in its proper position but falls back, the pessary is either not long enough or not curved enough, and it must be changed until a suitable one is found.

The best method to insert a pessary is as follows: Place the patient on her back across the bed as near to the edge as possible, with her knees drawn up. The physician then passes the fore and middle finger of his left hand just within the vulva, gently separates the lips, and presses downward cautiously on the perineum. He should hold the tips of the fingers of the right hand so that the concavity of the pessary looks toward the woman's left thigh. This end of the pessary is then slipped in between the fingers of the left hand, which are then removed, and the whole instrument enters the vagina by a steady pressure downward on the perineum. As it enters the fingers of the right hand should turn it half around on its long axis, making the concavity of its large curve look forward. The pessary now may be quite immovable, with its upper bar pressing the cervix in front. This position is more or less painful, and the physician should quickly introduce the index finger of his left hand, and hook down the curve of the pessary until it slips over the cervix into the cul-de-sac behind. This can be facilitated by elevating

the anterior bar of the pessary with the other hand. Examine everything carefully before withdrawing the finger.

No pessary should hurt or abrade the surface. To prevent this latter occurrence it is well from time to time to remove the pessary and examine the vagina. Abrasions are generally found at the point of union of the cervix with the posterior vaginal wall. The patient should always take a daily douche of tepid water, and report to her physician at once if anything seems amiss.

The removal of a lever pessary is most simple: simply hook the forefinger over the lower bar and make gentle traction. The pessary will, as it were, guide itself out, rotating spontaneously on its long axis.

There are, of course, a variety of pessaries. The intra-uterine stem pessary is intended as a splint to straighten out the flexion either backward or forward. Unfortunately the lining membrane of the uterus, delicate in character, is often injured by the action of such a body. In the form of smooth glass or hard rubber it may not do such harm, yet it is a dangerous procedure which to-day has been largely discarded.

Cutter's retroversion pessary and the Thomas modification have an extra vaginal base of support, being kept in position by a perineum strap, buckled to a waistband. They can be removed and replaced by the patient, and the pressure carefully regulated. They may be tried when intra-vaginal pessaries fail, but they are generally a source of annoyance and chafing. Ring-and-stem pessaries and cup-and-stem pessaries are stiff and unwieldy, but are useful in those cases where there is complete prolapse of the uterus and vagina with the absence of the vaginal portion of the cervix; or in severe cases of tears of the vagina and perineum, preventing the use of the ordinary pessaries, they are demanded.

It is a cardinal rule to remember that every pessary needs watching, producing, if neglected, deep ulcerations. I examined a woman some years ago who had worn a pessary for over a year unattended. The condition of her vagina was almost indescribable, foul-smelling to a degree, with deep ulcerations. The pessary, neglected, unclean, had been left to its own devices. There are cases on record where these instruments have been found embedded in the soft parts, requiring an operation to get them out.

In conclusion I would state that properly used the pessary is a most valuable adjunct to every physician's armamentarium, which should not be neglected or despised. *The Medical Age.*

## Therapeutics.

**Pessaries:** Giles (*Medical Press*), says pessaries are indicated in the following conditions: Hernia of the vaginal walls—that is, cystocele and rectocele; prolapse and procidentia of the uterus; backward displacements of the uterus.

**Granulating Wounds:** To secure rapid epidermization, Schley uses (*Medical Record*), finely powdered boric acid abundantly. This is then covered over with rubber tissue, held in place by adhesive plaster, then gauze and bandaged. Change dressing from five to seven days.

**Hay Fever:** Relief can be obtained in hay fever attacks (Parsons, in *Medical Record*) by the application of cold spinal douche, from fifteen to thirty seconds. Or another excellent method is the application of an ice bag, partially filled with cracked ice, applied to the back of the neck and upper part of the spine.

**Diarrhea of Consumption:** Opium in the form of Dover's powder, five grains, with ten grains of bismuth subnitrate, often checks the obstinate diarrhea of consumption.—Zederbaum in *Colorado Medical Journal*.

**Sprain:** G. Nostrom advocates early massage and active and passive motion in cases of sprain. If physicians paid more attention to this method of treatment they would keep many patients out of the hands of "bone setters" and other quacks. Properly applied massage often cures in one or two days cases that under the old treatment by immobilization would consume weeks. The massage first applied should be very gentle, so as not to cause irritation or too much pain, and then gradually be increased as the tension of the tissues subsides. Not until the inflammation has become less intense is it advisable to introduce real frictions. At first the sittings should be protracted, of at least twenty minutes' duration, and should, when possible, be repeated several times a day. The

treatment may be summed up as follows: (1) At the initial stage, in the presence of classical phenomena, including a great deal of pain, effleurage. (2) When the pain has decreased a great deal, frictions and passive movements; later, active movements. Walking at the beginning ought not to be permitted. (3) In all sprains of the lower extremities, after every seance, application of a gauze bandage, a precaution all the more indicated when the patients are allowed to use their legs and walk. (4) In order to prevent real relapses, as well as to prevent the inflammation taking on a chronic character, the treatment ought to be kept up until complete restitution has taken place. —*Medical Record*, November 19, 1904.

**Falling Hair:** Walsh (Abstract, *Jour. A. M. A.*, Oct. 8, 1904), recommends the following combination to prevent falling out of the hair:

R. Acid salicyl.	.....	ʒij.
Acid carbol.	.....	ʒj.
Olei ricini.	.....	ʒij.
Spiritus vini rect.	..... q. s. ad	ʒvj.

M. Sig.—Apply to the scalp freely once or twice daily.

*Journal des Practitcns*, May 21, 1904, advises:

R. Acid Acetic.	.....	♏ xv.
Chloral.	.....	gr. lxxv.
Ether.	.....	ʒj.

M. Sig.—Apply in the morning after a shampoo with soap.

Tsakiris (Abstract, *Canada Pract. and Rev.*, March, 1904), makes use of the stimulating properties of the refrigerating spray in the treatment of baldness. The spraying is performed once a week, and usually within a month the bald areas are covered with fine hair, and the falling out of the hair diminishes.—*Therapeutic Review*.

**Alopecia Areata:** The following formula is given in the *Med. Record*, March, 1904, for alopecia areata:

R. Hydrarg. chlorid corrosive.	.....	gr. ij.
Tr. cantharidis.	.....	ʒiv.
Aqua.	..... q. s. ad	ʒvij.

M. Sig.—Apply freely to affected area each night, after shampooing and drying.

F. H. Dillingham (*American Medicine*, March 12, 1904) believes that alopecia areata is parasitic in origin, and that the treatment should consist in the application of local remedies of

which he considers chrysarobin the best. He mentions that the discoloration it produces is one of its great disadvantages. It should not be used over too large an area at one time, and should be kept out of the eyes. The best results are obtained when the remedy is compounded with vaseline. The strength should be varied according to the sensibility of the skin, children and light complexioned persons requiring a weak preparation. In using it, an effort should be made to produce a mild dermatitis. When the trouble has been brought to a standstill, a mild sulphur ointment should be substituted.—*Therapeutic Review*.

**Phimosis:** The bloodless treatment of phimosis (Gehrung, in *Interstate Medical Journal*),

is as follows: Retract the skin on the penis until the redundant part, which is in front of the glans, disappears, and the meatus urethralis, and the meatus preputialis are exposed. Then insert a blunt and flat instrument like the eye part of a needle, probe between the foreskin and glans down to the sulcus, and sweep this around the glans from one side of the frenum to the other side of the same. The foreskin being thus released from these pseudo-adhesions, all that remains to do is to squeeze the glans out of the prepuce, a process somewhat similar to squeezing the stone out of a cherry. The sulcus must be completely exposed and the smegma thoroughly removed; the entire exposed part well oiled and the foreskin returned to its former place. The retraction and oiling should, on account of the soreness of the parts, not be repeated before forty-eight hours.

**Hydrastis:** Especially in alcoholic gastric catarrh, Blair Stewart (*Jour. A.M.A.*), has found hydrastis a valuable remedy. He combines it as follows:

R. Ext. hydrastis can. flid.	ml ii ss.
Bismuthi subgallatis.....	gr. ii ss.
Glycerini acidi carbolici.....	ml ss.
Spiritus chloroformi .....	ml iv
Elix. lactopeptin .....	q.s. 7a.

M.

This dose is repeated every one-half to two hours. He states the results are remarkable. Stimulant is entirely cut off in delirium tremens, and after a few doses, there is abhorrence at the mere mention of them.

## The Physician's Library

*The Medical Epitome Series.—Toxicology. A Manual for Students and Practitioners.* By EDWIN WELLES DWIGHT, M.D., Instructor in Legal Medicine, Harvard University. Series edited by Victor Cox Pedersen, A.M., M.D. Lea Brothers & Co., Philadelphia and New York.

This practical volume is intended as a brief compendium of the facts in connection with Toxicology. Students will find it in every way suitable to the requirements of their courses in this direction.

*International Clinics.. Vol III. Fourteenth Series. 1904.*

This volume is an exceptionally good production, well illustrated. Syphilis is a subject admirably taken up in a series of twelve papers. Besides this there are well prepared papers on Treatment, Surgery, Medicine, Gynecology, and an interesting clinical lecture on paralysis agitans, by F. W. Langdon, M.D., delivered at the Cincinnati (Ohio) Hospital. These are valuable quarterly additions to make to one's library on current medicine.

H. M. Caldwell Co., Boston, have just published a new authoritative work on Physical Culture by Dr. Dudley Allen Sargent, under the title of "Health, Strength, and Power." Dr. Sargent has spent thirty-five years of his life in the advancement of Physical Culture, twenty-five of which as the director of Harvard's Hemenway Gymnasium. His numerous articles and papers on physical training are well known, as well as his many inventions of the Modern System of Gymnasium Apparatus, which have been adopted all over the world. In this work of 280 pages, Doctor Sargent has aimed to make physical training more popular by devising a series of exercises which require no apparatus whatever. It is profusely illustrated with half-tone illustrations from original photographs furnished by the author. The book does not appeal to the athlete or student in whose life physical activity plays a considerable part, but to those who lead a sedentary life, whether man or woman. At this time, when the benefits of outdoor living and breathing pure air are being agitated, the simple exercises, when followed as here described, cannot but be found beneficial to the highest degree, and the work should be in every household.

# Dominion Medical Monthly

And Ontario Medical Journal

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VOL. XXIII.      TORONTO, DECEMBER, 1904.      No. 6.

## COMMENT FROM MONTH TO MONTH.

An important and decided step has been taken in Toronto and Ontario when was organized the Inebriate Reform Society of Ontario. Backed by representative and influential men, both within and without the medical profession, the new organization can make itself a power towards promoting wise legislation looking for the reformation of the unfortunate inebriate. It is now some time since a Bill was drafted by no less a personage, we understand, than the Premier of the Province himself, but either from lack of push from behind or disinterestedness amongst those who should zealously prosecute its promotion, it was never introduced into the Legislature. We are pleased to accord to Dr. Rosebrugh much praise for the unselfish way he has clung to a most worthy object, and trust that in the no very distant future he will see the complete success of his efforts. The need of proper institutions for the care of both acute and chronic alcoholics as well as for those unfortunately afflicted to the cocaine and morphine habits, is apparent to all medical men; and it is to be hoped that the new society will be able to exercise the proper influence with the Government so that we may soon see the establishment of these much desired institutions.

The initial step in the establishment of municipal sanatoria for the care and treatment of cases of tuberculosis has been taken in Ontario, when a short time ago representatives of the municipalities of Waterloo, Wellington, Brant, Oxford and Perth, the leading central counties of Western Ontario, met at Galt and discussed the proposal for the erection of a sanatorium which would receive their joint support and patronage, and at the same time care for the cases of tuberculosis arising amongst them. This idea is heartily to be commended, and it is a wonder that it has not been acted upon long ago when the Government has generously promised to aid counties or groups of counties in the erection, establishment and maintenance of these self-same sanatoria. The campaign against tuberculosis must not be allowed to lag. We would respectfully make the suggestion to these five municipalities that they follow suit in this matter of looking after part of the health of their different communities by organizing and looking after the health of all by having a properly appointed health officer, which they could afford to do at a comfortable salary.

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Montreal medicine recently lost in the person of Dr. Duncan Campbell MacCallum at the age of 81 years, a gentleman who up to a few years ago had much to do with educating the medical undergraduates of McGill. No sooner had the late Dr. MacCallum been graduated from the institution which he subsequently came to serve so faithfully, than he was picked out for high honors. After graduation in 1850 he continued the prosecution of his studies in London, Edinburgh and Dublin, and was admitted to the degree of M.R.C.S., Eng., in 1851. Returning to his native province he was at once appointed Demonstrator of Anatomy at McGill, which was followed in 1856 by appointment to the chair of Clinical Surgery which he relinquished in 1860 for that of Clinical Medicine and Medical Jurisprudence. This he held up to 1868, when he became Professor of Obstetrics and of Diseases of Women and Children, an appointment he held up to the time of his retirement in 1883, when the University appointed him emeritus professor, retaining his precedence in the University. Dr. MacCallum was held in high esteem by the profession generally, and had attained to an *âge* not usually granted to the disciples of *Æsculapius*.

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We are given to sorrow more for the loss of a man in the full enjoyment of fame and success, while yet young, and with the

prospects of a very useful life still before him. The medical profession all the world over knew of the Allinghams, father and son, and the announcement of the tragic death of the latter shocked the entire medical community. The late Dr. Herbert William Allingham was but forty-two years of age, but in the space of his short life had attained to the top rung of the ladder of fame, as it is known in the medical profession. Like others he was the victim of an unfortunate accident, which may happen to the bravest and at the same time the most careful surgeon. Possessing the knowledge of what this meant, no doubt he often shuddered at the thought of what fate might have in store for him, which, with family bereavement, imposed too hard a strain upon his over-taxed mental and physical strength.

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But "the world does not discriminate well in crowning its heroes," said a Portland, Oregon, preacher, not long ago to a congregation of medical men. If it did the profession of medicine would be more fittingly recognized. "Is it not strange," he said, "that the heroism of an hour is often recorded and rewarded while the heroism of a life is passed by unnoticed?" But the medical man is not looking for honors. Those are better left to the chicanery and trickery of unsavory and unsanitary politics, as rewards for corruption and wrongdoing. We wonder how that congregation of medical men felt when they had this launched at them from the Portland pulpit: "The medical profession is the highest, the most difficult, the most important, the most ancient, the most honorable among the merely human avocations of men." With a testimonial like this in its pocket the medical profession should exercise eternal vigilance in guarding well the portals thereof.

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"If a man die shall he live again?" was the key note in Dr. Osler's now, somewhat, famous Ingersoll lecture on Science and Immortality. After a cursory reading of the lecture one is rather surprised to find that the pith of it is but just the simple faith of childhood which first commences to reason upon these matters. "Some of you will wander through all phases, to come at last, I trust, to the opinion of Cicero, who had rather be mistaken with Plato than be in the right with those who deny altogether the life after death; and this is my own *confessio fidei*." Believe in a hereafter, you lose nothing; disbelieve, you lose all. Whether that be an honest rendering of the matter we leave it to our good friends of the cloth to argue out.

When a man grows gray and attains to the ninth decade of life in the medical profession and continues to hold the confidence, love and regard of his confreres, it is something for which all feel grateful. Partaking of all this we can heartily congratulate Dr. James H. Richardson of this city, who on October the 16th attained his eighty-first year. We are pleased to learn, and equally pleased to announce, that Dr. Richardson is in the enjoyment of most excellent health, and that he can yet "draw" well.

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Montreal furnishes splendid evidence on behalf of vaccination as seen in the annual report issued by the Medical Health Officer of that city. On the 1st of January, 1903, there were five persons in the Montreal Smallpox Hospital. During 1903 there were ninety other cases. There were two deaths, and there remained in the hospital on the 1st of January, 1904, one patient. Out of the ninety cases which were admitted during the year, not even one person suffered from the disease, who had been vaccinated during the past five years. There were thirteen who had been vaccinated some years ago, and there were seventy-seven who had never been vaccinated at all. This simply adds another proof to the long list of confirmatory evidence in favor of vaccination, and it emphasizes as well that continuous immunity can only be secured through repeated vaccinations. It is most unfortunate that now and again some one dies not from vaccination but from some disease which follows either directly or indirectly upon the operation; and we would conceive that wherever this occurs it should be the duty of the health officer in whose district such death or deaths occur, to make the most careful and impartial investigation as to the cause thereof; for in these enlightened days there still live some who would choose to walk in darkness rather than in light. As concerns the city of Montreal, itself, there is now very little opposition experienced there when officers of the health department go the rounds of the schools vaccinating the pupils.

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Canada is annually turning into the ranks of the medical profession some four or five hundred young men and women, most of whom before they entered upon their medical studies were students of algebra, geometry, arithmetic, etc., in the various High Schools and Collegiate Institutes of the different provinces. With a splendid medical training they go out to seek for themselves a livelihood and honor and success in practice. They have

got into a profession which prides itself on its ethics, which is the strictest profession in this respect upon earth, and which is a profession which frowns down hard and sore any departure from the rules they order their professional lives by. Such conditions prevailing, is it not time that the authorities in our medical colleges recognize that they are more than derelict in their duty in not providing for a course of lectures to train these young men in the honorable conduct of themselves in professional life? Will not some one who has a "say" in the innermost sanctums of these institutions take it upon himself to advocate a course in medical ethics?

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Teething, convulsions and the gum lancet is a subject which we would like to have some of our subscribers give us their opinions on. We would like to know the present-day practice so far as the general practitioner in the country is concerned, whether gums are lanced very often, whether convulsions are caused very much by teething, or if ever they are the result of teething at all. These thoughts have occurred to us at this time, not but that they have occurred to us before and to others, but by reason of seeing in the November "Archives of Pediatrics" a discussion bearing on the subject before the Pediatric Section of the New York Academy of Medicine. Convulsions in the second half of the first year are of frequent occurrence; and Dr. Spratling, of the Craig Colony for Epileptics at Sonyea, N.Y., apparently holds to the belief that "teething" convulsions in infancy lead to epilepsy in later life. It would be very interesting and valuable matter to publish whether these so-called "teething" convulsions, were actually caused by the eruption of teeth or whether they were due to other causes. Teething is a physiological process, and why it alone should cause such an alarming condition as a convulsion, we do not think has been sufficiently elucidated. We sincerely hope that our readers and others will give their opinion of the entire matter.

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Thank you! We have no commission business amongst us in Canada. We are in this position in this country that when we recognize that we cannot do for our patient all that we would like to see done for him that we advise his consulting one giving his whole and undivided attention to diseases of different organs, such as the eye, the ear, etc. And we do not ask him for a commission in referring any of these cases to him; and we sincerely hope that no such disgraceful, selfish, unwarrantable practice will

arise amongst us. These remarks are called forth by reading of what has been taking place in Chicago where eighteen physicians or surgeons, we are not quite sure which they were, offered an apparent young practitioner from a distance a commission if he would refer his "mythical" patient to them for treatment. He had written to one hundred, and it is nice to know that only eighteen wanted to give him anything. If a patient calls a general practitioner to attend him in a disease requiring special knowledge more than he thinks he possesses, if he is conscientious for the welfare of that patient, he will advise some one in whom he has confidence. Why should he continue to attend that patient any longer, when he knows, for instance, that he requires an operation for appendicitis, and that he does not want to do it himself; or that he requires an iridectomy, and he knows he has never done a iridectomy, and would not care to undertake it now? His plain duty to his patient is to advise him to consult with one who can relieve him. This ought to be the great, good thing in the practice of medicine—your patient's interest alone. It is because of this unselfish interest that we consider that we are used very badly when beaten out of our rightful fees. No! We hope that the commission business will never be seeded in Canadian soil. We hope that we esteem our specialists more than that than to ask them for a commission—shame on the word!—for sending them a patient we are incapable of attending ourselves. The most eminent specialist on diseases of the eye need not care whether he knows anything of gynecology or not; he does not want midwifery cases, and, of course, would not take them. The general practitioner knows more about children, midwifery and general diseases than all the eye or ear specialists put together. His knowledge is broader, his sympathies are broader, and he need not fear; he is as good a man as any specialist. But we do not all recognize this. The man who attends to a baby in convulsions and carries it through to life and health is just as good a man as one who can remove a cataract or scrape out a mastoid. General practitioners are wont to think that the specialist is away and above him, but he is not, and he does not need to ask for, and should certainly spurn anything that savors of a commission. The specialist has got to say that he cannot treat anything outside his own small sphere. Why should not the general practitioner say that he cannot treat a patient with a disease requiring special knowledge?

## NEWS ITEMS

DR. J. M. LEFEVRE, Vancouver, B.C., has gone to England.

THE birth rate in Montreal, during 1903, was 36.08 per 1,000 of the population.

DR. J. F. UREN, Toronto, has removed to the corner of Church and Maitland Streets.

DR. W. J. CLARKE, Orangeville, Ont., has moved to Toronto, to practice, on Dovercourt Road.

DR. McKEOWN, of the Vancouver General Hospital, has resigned, and will resume private practice.

DR. GEO. E. EAKINS, of Toronto, formerly of Belleville, has accepted a position in a doctor's office at the Soo.

DR. THOMAS DOUGLAS, of Hamilton, has purchased the medical practice of the late Dr. Mallory, at Colborne.

DR. J. N. ELLIOTT BROWN, Secretary of the Gold Territory, Dawson, and formerly Secretary of the Ontario Medical Association, is visiting, with his wife, in Toronto.

TORONTO FIREMEN AND FIRST AID TO INJURED.—Dr. Sheard, Toronto's Medical Health Officer, will prepare a set of first-aid instructions for the Toronto firemen to commit to memory.

DIPHTHERIA IN MONTREAL.—There were thirty-one cases of diphtheria reported in Montreal during the week ending November 26th.

MONTREAL BIRTH RATE.—The mean birth rate of Montreal for the past sixteen years, without distinction as to nationality, was 39.10 per 1,000 of the population.

WILL LESSEN SPREAD OF CONSUMPTION IN MONTREAL.—The Montreal City Council will pass a by-law prohibiting spitting on the streets and in public places, as well as in public conveyances.

DR. L. G. STEWART, son of the late George Stewart, of Aurora, has sailed for Glasgow from Montreal. He hopes to visit the hospitals of Edinburgh, London, and Dublin before returning.

DR. R. T. MACKENZIE, a native of Almonte, has been appointed physical director of the University of Pennsylvania. He was one of McGill's greatest athletes.

DR. A. YALE MASSEY, well known as a former house surgeon at the Huntsville Hospital, has sailed for England, where he will take a post-graduate course in the hospitals of London.

DR. E. E. LATTA, of Castleton, has rented offices in the Yeomans' Block, Colborne, and will occupy a suite of rooms at the Brunswick House. Dr. Latta is a graduate of Trinity University, and a Fellow of Trinity Medical College.

**STRONG EVIDENCE FOR VACCINATION.**—Of the ninety cases admitted to the Montreal Smallpox Hospital last year, seventy-seven had never been vaccinated; thirteen had been vaccinated some years ago; none had been vaccinated within the past five years.

**SMALLPOX IN MONTREAL IN 1903.**—On January 1st, 1903, there were five patients in the Montreal Smallpox Hospital, and there were admitted during the year ninety cases. The deaths numbered two, and in the hospital on January 1st, 1904, there was one patient.

DR. A. L. HORE has arrived lately at the Rainy River District, near Fort Francis, where he will be employed to doctor in the lumber camps of the Graham & Horn Co., of Fort William. Dr. Hore is a graduate of the faculty of medicine in the University of Toronto.

**TWO SCHOLARSHIPS FOR BRITISH COLUMBIA STUDENTS.**—Through the generosity of one of Victoria's public-spirited citizens, two scholarships, each of the annual value of \$250, are open to British Columbia students, tenable during the third and fourth years, in arts or science, at either Toronto or McGill Universities.

**VANCOUVER GENERAL HOSPITAL.**—The house surgeon's report for the month of October shows that there were remaining from September 39 males and 11 females; admitted during the month, males 54, females 15; cured, males 44, females 14; died, 2; remaining in hospital at the end of the month, 47 males and 12 females. Drs. G. D. Johnston and Glen Campbell were appointed to act as ophthalmologists, otologists, and laryngologists.

VACCINATION POPULAR IN MONTREAL.—Civic officials who now go the rounds of the schools, vaccinating, in Montreal, meet with no opposition to the performance of the operation. Two years ago, when the officials visited the schools, over one thousand pupils refused to be vaccinated.

DR. ERNEST CURRAN, Orillia, Ont., who has been taking a post-graduate course at Edinburgh since last spring, successfully passed his examinations last week, and took his degree of L.R.C.P. and S., Edinburgh. He will probably not return home till next year, taking a course in the London hospitals meanwhile.

DR. R. R. HOPKINS, who is about leaving Grand Valley, Ont., was presented with a set of regalia by the members of Scott Lodge, A.F. & A.M., and with a gold-headed ebony cane by the A.O.U.W. Dr. Hopkins has been a resident of Grand Valley since 1887, and has been an efficient member of both the school and library boards.

PROVINCIAL HOSPITAL OF NEW BRUNSWICK.—The Provincial Hospital for the Cure of Nervous Diseases is overcrowded, there being some 554 inmates, and a commission is at work examining all patients, the object being to remove all harmless cases to other quarters. Those comprising this commission are the new superintendent, Dr. J. V. Anglin, Dr. G. A. B. Addy, and Dr. A. F. Emery, of St. John.

EXAMINING BOARD OF BRITISH COLUMBIA MEDICAL COUNCIL.—The Examining Board of the British Columbia College of Physicians and Surgeons for the current year are: Dr. J. C. Fagan, Victoria; Dr. W. J. McGuigan, Vancouver; Dr. R. Eden Walker, New Westminster; Dr. A. P. Proctor, Kamloops; Dr. J. M. Lefevre, Vancouver; Dr. J. C. Davie, and Dr. O. M. Jones, Victoria.

BRITISH COLUMBIA MEDICAL EXAMINATIONS.—Out of thirteen candidates who came before the Examining Board of the College of Physicians and Surgeons of British Columbia, nine passed with honors. These were: Dr. Eliza Anderson, of New Westminster, who will practise in that city; Dr. R. McCaffrey, of Toronto; Dr. J. N. English, New Westminster; Dr. F. J. Hacking, Minnesota; Dr. William Stephen, and Dr. R. P. McKenzie, of Rossland; Dr. F. C. Bishop, Crow's Nest Pass; Dr. William Workman, and Dr. R. J. Cairns.

DR. TYE, who has practised in Chatham for the last ten years, has disposed of his practice to Drs. J. S. Agar & Agar, formerly of Dover Centre. Dr. Tye will continue active practice until the first of the year, when he leaves for Kansas City, Mo., where he will continue the practice of medicine.

MONTRÉAL GENERAL HOSPITAL.—For the three months ending September 30th, there were 820 patients treated to a conclusion in the Montreal General Hospital. There were 57 deaths, 21 of which occurred within three days of admission. In the out-door department, there were 10,235 consultations, as compared with 9,692 for the corresponding period of 1903.

MONTRÉAL WATER COMMISSION.—The following commission has been appointed by the Montreal City Council to pronounce upon the quality of Montreal water: Dr. R. Ruttan, Professor of Chemistry, McGill University; Dr. A. Bernier, Professor of Bacteriology, Laval University; Dr. J. E. Laberge, chemist, bacteriologist, and Director of the Montreal Civic Hospital; Mr. Milton Hersey, chemist, and city analyst.

TORONTO GENERAL HOSPITAL.—The report of the Toronto General Hospital for October, shows a total number of patients in the hospital of 245 on October 31st, as against 244 the month previous. During October, 229 persons were admitted, and there were seven births, while 212 were discharged, and 23 died. The total number treated was 480. Over 30 patients received outside treatment, and 200 cases were attended at the Emergency Hospital.

ASYLUM CHANGES.—Dr. R. W. Bell, Second Assistant Physician at the Asylum for the Insane, London, has been transferred to the position of Medical Inspector of the Provincial Board of Health. His position at London has been filled by the transfer of Dr. W. C. Herriman from Kingston, and Dr. MacNaughton, of London, has been transferred to Kingston to succeed Dr. Herriman. Dr. W. P. St. Charles, of the Mimico Asylum, has been appointed to the position of relieving officer to the public institutions, and Dr. Geo. M. Biggs has been appointed assistant to the superintendent at Mimico. Dr. W. T. Wilson, third assistant physician at the Hamilton Asylum, has been transferred to London to succeed Dr. MacNaughton.

## Special Selection

### THE CORRECTION OF ABNORMAL CONDITIONS OF THE BLOOD RELATIVE TO SURGICAL OPERATIONS.

BY S. C. EMLEY, A.B., M.D., WICHITA, KAN.

Late Pathologist, Augustana Hospital, Chicago, Ill.

Frequently the surgeon is called upon to operate on patients who, when they first present themselves, are in no condition to stand an operation on account of deficient quantity of blood or the poorness of its quality. On the other hand, it is desirable that the patient regain his normal condition as soon as possible after operation, whether the abnormal condition of blood is due to the operation or not.

The ideal remedy is that which will restore the normal condition of the blood in the shortest time with the least disturbance to the rest of the body, the digestive system particularly. Less necessary are palatability and cost of the remedy. To determine which of several preparations best fulfilled the above conditions was the purpose of this investigation.

All of the preparations used being recognized as good, Dr. A. J. Ochsner gave me permission to prescribe them as I saw fit to certain of his patients in Augustana Hospital. Only those cases were selected whose appearance indicated the need of a hematinic. As often as possible similar cases were paired off, one patient being given one preparation and the other patient another, and the results compared. The cases were paired according to pathological condition, age, sex, general condition and the condition of the blood as to hemoglobin and erythrocytes at the beginning of treatment. The preparations used were malt with iron and manganese; malt with iron, quinine and strychnine; Bland's pills, and the preparation known as pepto-mangan (Gude).

After watching the effect of the medication on the patients, and observing the records, it is seen that Bland's pills acted quickly, but constipated; the malt combinations caused nausea in a few patients, and the malt, manganese and iron combination

caused constipation in nearly all. The pepto-mangan, given in milk, was agreeable to take, and in no case did it cause nausea or constipation. While in two cases the Blaud's pills acted more quickly than pepto-mangan in two similar cases, on the whole the latter gave better and quicker results than any of the others, and at the same time caused no digestive disturbances in any of the cases.

Although the investigation was undertaken for the purpose of finding the best hematinic for surgical cases, it was tried in one case of chlorosis and in several obscure medical cases.

The following table shows the results obtained in all those cases where Gude's preparation was given. One to four drams were given in milk to each case, three times a day. The hemoglobin was estimated with Von Fleischel's hemometer, and the erythrocyte count made with the Thoma-Zeiss apparatus. The first blood count was made previous to operation in all surgical cases, and the last a short time before the patient's discharge from the hospital. The second count was never made immediately after the operation because of the temporary derangement due to the anesthetic and the loss of blood.

In the nineteen cases tabulated there is an average increase of 800,000 erythrocytes and of 14.5 per cent. hemoglobin. This improvement was during forty days on an average. The usual time a patient stays in the hospital is twenty-one days when the case is of ordinary severity from a surgical standpoint. Such cases were placed on tonic treatment and showed rapid improvement, but of such cases only one (Case 16) is noted because it might be urged they would improve equally fast with or without a tonic.

It is seen from the above table that even in the cachexia of carcinoma there is a temporary improvement, which shows that in the use of this tonic we are dealing with a powerful hematinic. In Case 17 there was no improvement, the patient dying shortly after the last count. At the autopsy I found a pyogenic abscess in the liver as large as an orange and about 200 c.c. of pus below the right kidney, which explained the retrogression. In all of the other operated cases the improvement was steady and marked, especially in uterine diseases accompanied by loss of blood. In the case of chlorosis (number 9) the improvement was remarkable, the patient being discharged cured in a little over a month, at which time all the symptoms had disappeared.—*Medical News*, September 24th, 1904.

Name.	Age.	Diagnosis.	Date.	Erythrocytes per c.c.	Hemoglobin	Per cent
1. G. N. ....	53	Carcinoma of stomach	9-29-03	2,920,000	33	
			10-12-03	3,400,000	45	
			10-25-03	3,260,000	42	
			11- 8-01	2,520,000	36	
			10-29-03	2,600,000	37	
2. Mr. L. ....	49	Carcinoma of stomach	11- 8-03	2,900,000	38	
			12- 5-03	2,400,000	27	
			12-19-03	2,400,000	26	
			12- 4-03	2,400,000	33	
3. Miss J. ....	17	Acute menorrhagia	12-26-03	3,565,000	44	
			12-27-03	4,160,000	49	
			12- 7-03	4,160,000	44	
4. Mrs. E. K. ....	33	Menorrhagia .....	1-10-04	5,000,000	64	
			1-18-04	5,100,000	62	
			12- 4-03	4,060,000	60	
5. Mr. S. ....	23	Neurasthenia (?) .....	1- 7-04	4,600,000	65	
			1-14-04	4,560,000	75	
			11-15-03	3,825,000	62	
6. Mr. K. ....	35	Tuberculosis of mesenteric glands	12-10-03	4,820,000	68	
			1- 4-04	4,710,000	66	
			10-25-03	4,000,000	60	
7. Mrs. F. ....	23	Pelvic abscess	11-23-03	5,100,000	69	
			12-11-03	4,970,000	78	
			12- 9-03	3,195,000	53	
8. Mrs. A. ....	34	Pelvic abscess .....	12-29-03	4,295,000	58	
			1-11-04	4,560,000	78	
			10-26-03	3,910,000	55	
9. Miss A. J. ....	16	Chlorosis .....	11-12-03	4,950,000	65	
			11-28-03	5,176,000	80	
			7-15-03	2,160,000	12	
10. Mrs. H. ....	49	Myoma of uterus	8-17-03	3,9 0,000	55	
			9-15-03	4,500,000	80	
			12- 1-03	2,180,000	15	
11. Johnny L. ....	13	Tuberculosis of hip	12-29-03	3,600,000	55	
			1-20-04	4,100,000	62	
			1-29-03	4,310,000	66	
12. Mr. E. P. ....	21	Tuberculosis of ankle	11-10-03	4,580,000	71	
			1-23-04	5,160,000	75	
13. Johnny F. ....	9	Extensive burn and infection of surface	11- 8-03	3,560,000	50	
			11-25-03	3,900,000	55	
			1- 3-04	4,362,000	68	
			11-25-03	3,600,000	55	
14. Miss E. B. ....	17	Perforative appendicitis .....	12-26-03	4,000,000	65	
			1- 2-04	4,250,000	69	
			12-26-03	4,200,000	60	
15. N. N. ....	29	Suppurative appendicitis	1- 2-04	4,160,000	66	
			1-20-04	5,120,000	77	
16. Mr. B. ....	28	Chronic appendicitis	1- 2-04	5,460,000	62	
			1- 1-04	4,320,000	70	
			1-23-03	4,800,000	78	
			10-10-03	3,30,000	45	
17. Mr. S. ....	37	Gangrenous appendicitis	10-27-03	4,280,000	65	
			11- 27-03	3,010,000	40	
			11-20-03	2,740,000	44	
18. Miss W. J. ....	29	Empyema .....	12- 9-03	3,700,000	52	
			1- 25-04	3,800,000	60	
			11-26-03	3,560,000	57	
19. Mr. F. ....	41	Cholelithiasis; Chronic appendicitis	12- 4-03	4,100,000	55	
			1-12-04	4,640,000	78	

Incurable

## Obituary

### DUNCAN CAMPBELL MACCALLUM, M.D.

Dr. Duncan Campbell MacCallum, who for upwards of thirty years was actively engaged in the teaching of his profession in connection with McGill University, died last month at the advanced age of eighty-one years.

Dr. MacCallum, who was a man of very wide sympathies and interests, was born at Isle aux Noix, Que., November 12th, 1825. He pursued his medical studies at McGill University, and graduated M.D. in 1850. He continued them in London, Edinburgh, and Dublin, and was admitted M.R.C.S., Eng., 1851.

Upon his return to Canada he was appointed demonstrator of anatomy, the duties of which he discharged in connection with the practice of his profession. In 1856 he was appointed to the chair of clinical surgery, being, in 1860, transferred to the chair of clinical medicine and medical jurisprudence, and in April, 1868, received the appointment of professor of midwifery and the diseases of women and children, which position he held until his resignation in 1883, on which occasion the governors of the university appointed him professor emeritus, retaining his precedence in the university.

Dr. MacCallum was elected visiting physician to the Montreal General Hospital, February, 1856. He discharged the duties of that position until 1877, when he resigned, and was placed on the consulting staff. From 1868 till 1883, he had charge of the University Lying-in Hospital, and for a period of fourteen years he was physician to the Hervey Institute for Children.

Dr. MacCallum always took a warm interest in the literature of his profession, and articles from his pen appeared in the *British-American Medical and Surgical Journal*, and *Canadian Medical Journal*. In 1854, he, in conjunction with Dr. Wm. Wright, established and edited the *Medical Chronicle*, which had an existence of six years. He published, in 1901, for private distribution, his addresses delivered at various functions. His essay, printed in the *McGill University Magazine* last year, "Reminiscences of the Medical School of McGill University," also attracted a great deal of attention.





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